

NEW YORK UNIVERSITY \* THE STEINHARDT SCHOOL OF EDUCATION  
DEPARTMENT OF NUTRITION, FOOD STUDIES AND PUBLIC HEALTH

**E33.2192 (01)**  
**NUTRITIONAL EPIDEMIOLOGY**  
**FALL 2006**  
**Thurs 4:55-6:35 PM**

Professor: Dr. Beth Dixon  
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Office Hours by Appointment

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**COURSE DESCRIPTION AND OBJECTIVES**

30 hours: 3 points.

Prerequisites: E33.0019 Nutrition and Health (or equivalent undergraduate nutrition class);  
E33.2190 Research Methods (or equivalent graduate level research methods class)

Fundamentals of nutritional epidemiology focused on the collection, analysis, and interpretation of data on dietary intake and nutritional status of diverse population groups. The course emphasizes critical evaluation of dietary assessment methods and the results of research studies associating intake of foods and nutrients or food consumption patterns with the risk of cancer, coronary heart disease, and other chronic diseases.

Objectives:

1. Identify dietary intake methods (e.g., 24-hour recalls, food frequency questionnaires), software for dietary data collection, and food and nutrient databases used in nutritional epidemiology research.
2. Describe the range of measures of nutritional status (e.g., anthropometric, clinical, and biochemical markers) used in nutritional epidemiology research.
3. Demonstrate knowledge of the sources and limitations of dietary survey, food supply, and food composition data, and the relevance of such data to nutritional epidemiology research.
4. Compare and contrast methods for analyzing individual dietary components (e.g., nutrients, foods, other dietary constituents such as phytochemicals, dietary supplements) vs. "total diet" measures (e.g., dietary diversity/dietary quality scores) in nutritional epidemiology research.
5. Identify common study designs used in nutritional epidemiology studies.
6. Demonstrate knowledge of statistical methods used in nutritional epidemiology studies and statistical issues that affect the interpretation of dietary data (e.g., adjustment for total energy intake, measurement error, underreporting).
7. Demonstrate the ability to critically evaluate current findings from nutritional epidemiology studies on the role of dietary factors (e.g., nutrients, foods, dietary supplements, dietary patterns) and chronic diseases such as cancer, coronary heart disease, diabetes, hypertension, obesity, osteoporosis.

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## REQUIRED READINGS

Research articles on Blackboard or on reserve at Bobst.

### \*\*\* VERY IMPORTANT REQUIREMENTS \*\*\*

Activated NYU Home Account so you can access the NYU Blackboard course site and receive emails related to class.

Access to a printer to print out PDF of research articles – some are long.

Access to the internet from a computer that allows you to get PDF files of articles published in on-line journals at Bobst. See <http://www.nyu.edu/its/howto/connect/proxy/> for NYU-NET Proxy Configuration information for your off-campus computer.

## ADDITIONAL REFERENCES

Gordis L. Epidemiology. 2<sup>nd</sup> edition. W.B. Saunders Co., 2000.

Hulley SB, Cummings SR, Browner WS, Grady D, Hearst N, Newman TB. Designing clinical research: An epidemiologic approach, 2<sup>nd</sup> edition. Lippincott Williams & Wilkins, 2001.

Last JM. A dictionary of epidemiology, 4<sup>th</sup> edition. Oxford University Press, 2001.

Margetts BM, Nelson M. Design concepts in nutritional epidemiology. 2<sup>nd</sup> edition. Oxford University Press, 1997.

\*\* Monsen ER. Research: Successful approaches. 2<sup>nd</sup> edition. American Dietetic Association, 2003. (Available at the NYU Book Center, 18 Washington Place or on-line at [www.eatright.org](http://www.eatright.org) )

Willett W. Nutritional epidemiology. 2<sup>nd</sup> edition. Oxford University Press, 1999.

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## GRADING FOR E33.2192 (01) \*

Midterm	~30%
Final Exam	~30%
Research Paper & Presentation	~35%
Class participation & assignments	~ 5%

\* Percentages are approximate and may change as the course progresses.

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### **DEPARTMENT POLICIES AND EXPECTATIONS FOR STUDENT PERFORMANCE**

Graduates of the department receive degrees as nutrition and food professionals, and professional behavior constitutes a key component of our academic programs. The department expects all students – at any level and in any program – to:

- Attend classes.
- Come to class on time.
- Complete reading assignments on schedule.
- Complete all course assignments on time.
- Write assignments using correct format, grammar, spelling, and reference style.
- **Turn in work that meets ethical standards and is not plagiarized.**
- Take responsibility for obtaining and making up missed work.
- Finish all course work by the end of the semester.
- Inform instructors *in advance* if classes need to be missed.
- Provide documentation to support reasons for missing assignments.

**Ethics:** “The department believes that maintenance of high ethical standards is an important aspect of professional training. We consider plagiarism, the presentation of someone else’s written or visual work as though it were your own, to be a serious form of academic misconduct that can result in a failing grade or dismissal from the University. Students are responsible for knowing the rules and how to follow them (see any standard guide to writing term papers).”

**Grading:** Takes the above standards into consideration and applies penalties for failure to meet them. Instructors are *not required* to read or give a passing grade to work that is late, incomplete, or inadequately prepared.

**Incomplete grades:** The department does not permit instructors to give Incomplete grades except in *documented* situations of dire emergency. In such circumstances, the department requires instructors to obtain and prepare an Incomplete Grade contract form and to have it signed by the program director and the department chair.

### SCHEDULE WITH READINGS & ASSIGNMENTS

**Notes:** Please read the background and class readings before class and bring copies of all articles to class so you can refer to them during the lecture and discussion.

DATE	TOPIC	Background Readings	Readings for Class	Assignment
Week 1 (Sept 7 '06)	Course overview—what is nutritional epidemiology?  Review of study designs, terminology	Monsen Ch 6  Langseth. Nutr Epi. ILSI Monograph, 1996.	Nelson. NCI, NIH. 2002.  Grimes & Schulz. Lancet 2002.  Huhmann. ON DPG 2006  Greenfield MLVH et al. Am J Sports Med 1998	Answer questions about the following 4 articles:  Hedley et al. JAMA 2004.  Horn-Ross et al. JNCI 2003.  McCullough et al. AJCN 2000.  Foster et al. NEJM 2003.
Week 2 (Sept 14 '06)	Statistics in nutritional epidemiology;  Association vs causation	Monsen Ch 3, 8, 11	Same articles as listed under Week 1	
Week 3 (Sept 21 '06)	Nutritional assessment: 24-hr recalls and records, FFQs, brief screeners, serum biomarkers, anthropometrics, physical activity	Monsen Ch 15, 17  Thompson & Subar. Ch 1. Dietary assessment methodology. 2001.  Keim et al. JADA 2004.	Subar et al. Am J Epidemiol 2001 + Commentaries by Willett, Block, Kipnis.  Seidell et al. AJCN 2001.  Potischman. J Nutr 2003.  Schoeller. J Nutr 1999.	

<b>DATE</b>	<b>TOPIC</b>	<b>Background Readings</b>	<b>Readings for Class</b>	<b>Assignment</b>
Week 4 (Sept 28 '06)	Nutrition surveillance (diet and food supply)  Dietary collection and analysis software;  Food and nutrient databases  Creating new FFQ  Reliability and validity of FFQ	Monsen Ch 13, 16	Dwyer et al. J Nutr 2003.  Raper et al. J Food Comp Anal 2004.  McCullough et al. JADA 1999.  Subar AF. JADA 2004.  Jensen et al. JADA 2004.  Satia-Abouta et al. AJE 2003.	Website activity
Week 5 (Oct 5 '06)	Nutrients vs foods vs patterns; scores vs cluster vs factor analysis	Kant. JADA 2004.	Lancaster et al. J Nutr 2006.  McCullough et al. AJCN 2002.  Tucker et al. AJCN 2002.  Dixon et al. AJCN 2004.	
Week 6 (Oct 12 '06)	Analytical issues: measurement error, underreporting, usual intake, energy adjustment, confounding		Subar et al. AJE 2003 + Commentaries by Willett, Kipnis  Bingham et al. Lancet 2003 + Commentary by Prentice  Flegal. AJCN 1999.  Fraser. AJCN 2003.	

DATE	TOPIC	Background Readings	Readings for Class	Assignment
Week 7 (Oct 19 '06)	<b>MIDTERM</b>			
Week 8 (Oct 26 '06)	Studies in children  (Including guest lecture on SchoolFoodPlus in NYC)		Fox et al. JADA 2004.  Rose & Bodor. Pediatrics 2006.  Fitzgibbon et al. J Pediatr 2005.  Gortmaker et al. Arch Pediatr Adolesc Med 1999.  Other articles TBD	Student Presentations
Week 9 (Nov 2 '06)	Studies in adults  (Including guest lecture on diet and AMD)		Smith-Warner et al. AJE 2006.  Park et al. JAMA 2005.  Bingham et al. Lancet 2003.  Mares et al. Arch Ophthalmol 2004.  Other articles TBD	Student Presentations
Week 10 (Nov 9 '06)	Women's health (e.g., WHI, WHEL)  (Including guest lecture on dietary supplement use in women)		Howard et al. JAMA 2006.  Newman et al. JADA 2005.  Jasti et al. J Nutr 2005.  Cogswell et al. J Nutr 2003.	Student Presentations

<b>DATE</b>	<b>TOPIC</b>	<b>Background Readings</b>	<b>Readings for Class</b>	<b>Assignment</b>
Week 11 (Nov 16 '06)	Diet and obesity, metabolic syndrome		Adams et al. NEJM 2006  Pereira et al. Lancet 2005.  Millen et al. AJCN 2006.  Zemel et al. Obes Res 2004.  Harvey-Berino et al. Obes Res 2005.	Student Presentations
Week 12 (Nov 30 '06)	Diet and heart disease, hypertension		Hung et al. JNCI 2004.  Lonn et al. NEJM 2006.  Harsha et al. JADA 1999.  Elmer et al. Ann Intern Med 2006.  Estruch et al. Ann Intern Med 2006.	Student Presentations
Week 13 (Dec 7 '06)	Diet and cancer		Goodman et al. JNCI 2004.  Miller et al. Ann Intern Med 2005.  Klein. Ann NY Acad Sci 2004.  Garland et al. AJPH 2006.  Schabath et al. JAMA 2005.	Student Presentations

<b>DATE</b>	<b>TOPIC</b>	<b>Background Readings</b>	<b>Readings for Class</b>	<b>Assignment</b>
Week 14 (Dec 12 '06)	Review			<b>Research Paper due</b>
<b>FINALS WEEK</b> (Dec 21 '06) <b>Class 8-9:50 PM</b>	<b>FINAL EXAM</b>			

**Research Articles listed under “Background Readings” and “Readings for Class”  
(posted on Blackboard under Course Documents)**

**Week 1 (Sept 7 '06)**

Langseth L. Nutritional epidemiology: possibilities and limitations. Washington, DC: ILSI Press, 1996.

Nelson N. Epidemiology in a nutshell. Bethesda, MD: National Cancer Institute, National Institutes of Health, 2002.

Grimes DA, Schulz KF. An overview of clinical research: the lay of the land. *Lancet*. 2002;359:57-61.

Huhmann M. Statistics: an introduction. Available at [www.oncologynutrition.org](http://www.oncologynutrition.org)

Greenfield MLFH, Kuhn JE, Wojtys EM. A statistics primer: Correlation and regression analysis. *Am J Sports Med*. 1998;26:338-343.

For Assignment

Hedley AA, Ogden CL, Johnson CL, Carroll MD, Curtin LR, Flegal KM. Prevalence of overweight and obesity among US children, adolescents, and adults, 1999-2002. *JAMA*. 2004;291:2847-2850.

Horn-Ross PL, John EM, Canchola AJ, Stewart SL, Lee MM. Phytoestrogen intake and endometrial cancer risk. *J Natl Cancer Inst*. 2003;95:1158-1164.

McCullough ML, Feskanich D, Stampfer MJ, Rosner BA, Hu FB, Hunter DJ, Variyam JN, Colditz GA, Willett WC. Adherence to the Dietary Guidelines for Americans and risk of major chronic disease in women. *Am J Clin Nutr*. 2000; 72:1214-1222.

Foster GD, Wyatt HR, Hill JO, McGuckin BG, Brill C, Mohammed BS, Szapary PO, Rader DJ, Edman JS, Klein S. A randomized trial of a low-carbohydrate diet for obesity. *N Engl J Med*. 2003;348:2082-2090.

**Week 2 (Sept 14 '06)**

**Same articles as Week 1**

**Week 3 (Sept 21 '06)**

Thompson FE, Subar AF. Dietary assessment methodology. In: *Nutrition in the Prevention and Treatment of Disease* (eds. Coulston AM, Rock CL, Monsen ER). San Diego CA: Academic Press, 2001.

Keim NL et al. America's obesity epidemic: measuring physical activity to promote an active lifestyle. *J Am Diet Assoc*. 2004;104:1398-1409.

Subar AF, Thompson FE, Kipnis V, Midthune D, Hurwitz P, McNutt S, McIntosh A, Rosenfeld S. Comparative validation of the Block, Willett, and National Cancer Institute Food Frequency Questionnaires: the Eating at America's Table Study (EATS). *Am J Epidemiol* 2001;154:1089-1099.

Related Commentaries:

Willett W. Invited commentary: A further look at dietary questionnaire validation. *Am J Epidemiol*. 2001;154:1100-1101.

Block G. Invited commentary: Another perspective on food frequency questionnaires. *Am J Epidemiol*. 2001;154:1103-1104.

Subar AF et al. Subar et al. Respond to “A further look at dietary questionnaire validation” and “Another perspective on food frequency questionnaires.” *Am J Epidemiol*. 2001;154:1105-1106.

Seidell JC, Kahn HS, Williamson DF, Lissner L, Valdez R. Report from a Centers for Disease Control and Prevention Workshop on Use of Adult Anthropometry for Public Health and Primary Health Care. *Am J Clin Nutr.* 2001;73:123-126.

Potischman N. Biologic and methodologic issues for nutritional biomarkers. *J Nutr.* 2003;133(suppl):875S-880S.

Schoeller DA. Recent advances from application of doubly labeled water to measurement of human energy expenditure. *J Nutr.* 1999;129:1765-1768.

#### **Week 4 (Sept 28 '06)**

Dwyer J, Picciano MF, Raiten DJ, Members of the Steering Committee. Collection of food and dietary supplement intake data: What We Eat in America-NHANES. *J Nutr.* 2003;133:590S-600S.

Raper N, Perlof B, Ingwersen L, Steinfeldt L, Anand J. An overview of USDA's Dietary Intake Data System. *J Food Comp Anal.* 2004;17:545-555.

McCullough ML, Karanja MJ, Obarzanek E, Phillips KM, Laws RL, Vollmer WM, O'Connor EA, Champagne CM, Windhauser MM. Comparison of 4 nutrient databases with chemical composition data from the Dietary Approaches to Stop Hypertension trial. *J Am Diet Assoc.* 1999;99:S45-S53.

Subar AF. Developing dietary assessment tools. *J Am Diet Assoc.* 2004;104:769-770.

Jensen JK, Gustafson D, Boushey CJ, Auld G, Bock MA, Bruhn CM, Gabel K, Misner S, Novotny R, Peck L, Read M. Development of a food frequency questionnaire to estimate calcium intake of Asian, Hispanic, and white youth. *J Am Diet Assoc.* 2004;104:762-769.

Satia-Abouta J, Patterson RE, King IB, Stratton KL, Shattuck AL, Kristal AR, Potter JD, Thornquist MD, White E. Reliability and validity of self-report of vitamin and mineral supplement use in the VITamins and Lifestyle Study. *Am J Epidemiol.* 2003;157:944-954.

#### **Week 5 (Oct 5 '06)**

Kant AK. Dietary patterns and health outcomes. *J Am Diet Assoc.* 2004;104:615-635.

Lancaster KJ, Watts SO, Dixon LB. Dietary intake and risk of coronary heart disease differ among ethnic subgroups of black Americans. *J Nutr.* 2006;136:446-451.

McCullough ML, Feskanich D, Stampfer MJ, Giovannucci EL, Rimm EB, Hu FB, Spiegelman D, Hunter DJ, Colditz GA, Willett WC. Diet quality and major chronic disease risk in men and women: moving toward improved dietary guidance. *Am J Clin Nutr.* 2002;76:1261-1271.

Tucker KL, Chen H, Hannan MT, Cupples LA, Wilson PW, Felson D, Kiel DP. Bone mineral density and dietary patterns in older adults: the Framingham Osteoporosis Study. *Am J Clin Nutr.* 2002;76:245-252.

Dixon LB, Balder HF, Virtanen M, Rashidkhani B, Mannisto S, Krogh V, van den Brandt PA, Hartman AM, Pietinen P, Tan F, Virtamo J, Wolk A, Goldbohm RA. Dietary patterns associated with colon and rectal cancer: Results from the DIETSCAN Project. *Am J Clin Nutr* 2004;80:1003-11.

**Week 6 (Oct 12 '06)**

Subar AF, Kipnis V, Troiano RP, Midthune D, Schoeller DA, Bingham S, Sharbaugh CO, Trabulsi J, Runswick S, Ballard-Barbash R, Sunshine J, Schatzkin A. Using intake biomarkers to evaluate the extent of dietary misreporting in a large sample of adults: The OPEN Study. *Am J Epidemiol.* 2003;158:1-13.

Related Commentaries:

Willett W. Invited commentary: OPEN questions. *Am J Epidemiol.* 2003;158:22-24.

Kipnis V, Subar AF, Schatzkin A, et al. Kipnis et al. Respond to "OPEN questions." *Am J Epidemiol.* 2003;158:25-26.

Bingham SA, Luben R, Welch A, Wareham N, Khaw KT, Day N. Are imprecise methods obscuring a relation between fat and breast cancer? *Lancet.* 2003;362:212-214.

Related Commentary:

Prentice RL. Dietary assessment and the reliability of nutritional epidemiology reports. *Lancet.* 2003;362:182-183.

Flegal KM. Evaluating epidemiologic evidence of the effects of food and nutrient exposures. *Am J Clin Nutr.* 1999;69:1339S-1344S.

Fraser GE. A search for truth in dietary epidemiology. *Am J Clin Nutr.* 2003;78(Suppl):521S-525S.

**Week 7 (Oct 19 '06) – MIDTERM****Week 8 (Oct 26 '06) – Studies in Children**

Fox MK, Pac S, Devaney B, Jankowski L. Feeding Infants and Toddlers Study: What foods are infants and toddlers eating? *J Am Diet Assoc.* 2004;104(1 Suppl 1):s22-s30.

Rose D, Bodor JN. Household food insecurity and overweight status in young school children: results from the Early Childhood Longitudinal Study. *Pediatrics.* 2006;117:464-473.

Fitzgibbon ML, Stolley MR, Schiffer L, Van Horn L, KauferChristoffel K, Dyer A. Two-year follow-up results for Hip-Hop to Health Jr.: a randomized controlled trial for overweight prevention in preschool minority children. *J Pediatr.* 2005 May;146(5):618-625.

Gortmaker SL, Peterson K, Wiecha J, Sobol AM, Dixit S, Fox MK, Laird N. Reducing obesity via a school-based interdisciplinary intervention among youth: Planet Health. *Arch Pediatr Adolesc Med.* 1999;153:409-418.

\*Other articles TBD for guest lecture

**Week 9 (Nov 2 '06) – Studies in Adults**

Smith-Warner SA, Spiegelman D, Ritz J, Albanes D, Beeson WL, Bernstein L, Berrino F, van den Brandt PA, Buring JE, Cho E, Colditz GA, Folsom AR, Freudenheim JL, Giovannucci E, Goldbohm RA, Graham S, Harnack L, Horn-Ross PL, Krogh V, Leitzmann MF, McCullough ML, Miller AB, Rodriguez C, Rohan TE, Schatzkin A, Shore R, Virtanen M, Willett WC, Wolk A, Zeleniuch-Jacquotte A, Zhang SM, Hunter DJ. Methods for pooling results of epidemiologic studies: the Pooling Project of Prospective Studies of Diet and Cancer. *Am J Epidemiol.* 2006;163:1053-1064.

Park Y, Hunter DJ, Spiegelman D, Bergkvist L, Berrino F, van den Brandt PA, Buring JE, Colditz GA, Freudenheim JL, Fuchs CS, Giovannucci E, Goldbohm RA, Graham S, Harnack L, Hartman AM, Jacobs DR Jr, Kato I, Krogh V, Leitzmann MF, McCullough ML, Miller AB, Pietinen P, Rohan TE, Schatzkin A, Willett WC, Wolk A, Zeleniuch-Jacquotte A, Zhang SM, Smith-Warner SA. Dietary fiber intake and risk of colorectal cancer: a pooled analysis of prospective cohort studies. *JAMA.* 2005;294:2849-2857.

Bingham SA, Day NE, Luben R, Ferrari P, Slimani N, Norat T, Clavel-Chapelon F, Kesse E, Nieters A, Boeing H, Tjonneland A, Overvad K, Martinez C, Dorronsoro M, Gonzalez CA, Key TJ, Trichopoulou A, Naska A, Vineis P, Tumino R, Krogh V, Bueno-de-Mesquita HB, Peeters PH, Berglund G, Hallmans G, Lund E, Skeie G, Kaaks R, Riboli E; European Prospective Investigation into Cancer and Nutrition. Dietary fibre in food and protection against colorectal cancer in the European Prospective Investigation into Cancer and Nutrition (EPIC): an observational study. *Lancet.* 2003;361:1496-1501. Erratum in: *Lancet.* 2003;362:1000.

Mares JA, La Rowe TL, Blodi BA. Doctor, what vitamins should I take for my eyes? *Arch Ophthalmol.* 2004;122:628-635.

\*Other articles TBD for guest lecture

**Week 10 (Nov 9 '06) – Women's Health**

Howard BV, Van Horn L, Hsia J, Manson JE, Stefanick ML, Wassertheil-Smoller S, Kuller LH, LaCroix AZ, Langer RD, Lasser NL, Lewis CE, Limacher MC, Margolis KL, Mysiw WJ, Ockene JK, Parker LM, Perri MG, Phillips L, Prentice RL, Robbins J, Rossouw JE, Sarto GE, Schatz IJ, Snetselaar LG, Stevens VJ, Tinker LF, Trevisan M, Vitolins MZ, Anderson GL, Assaf AR, Bassford T, Beresford SA, Black HR, Brunner RL, Brzyski RG, Caan B, Chlebowski RT, Gass M, Granek I, Greenland P, Hays J, Heber D, Heiss G, Hendrix SL, Hubbell FA, Johnson KC, Kotchen JM. Low-fat dietary pattern and risk of cardiovascular disease: the Women's Health Initiative Randomized Controlled Dietary Modification Trial. *JAMA.* 2006;295:655-666.

Newman VA, Thomson CA, Rock CL, Flatt SW, Kealey S, Bardwell WA, Caan BJ, Pierce JP; Women's Healthy Eating and Living (WHEL) Study Group. Achieving substantial changes in eating behavior among women previously treated for breast cancer—an overview of the intervention. *J Am Diet Assoc.* 2005;105:382-391.

Jasti S, Siega-Riz AM, Cogswell ME, Hartzema AG, Bentley ME. Pill count adherence to prenatal multivitamin/mineral supplement use among low-income women. *J Nutr.* 2005;135:1093-1101.

Cogswell ME, Kettel-Khan L, Ramakrishnan U. Iron supplement use among women in the United States: science, policy and practice. *J Nutr.* 2003;133:1974S-1977S.

**Week 11 (Nov 16 '06) – Diet and obesity, metabolic syndrome**

Adams KF, Schatzkin A, Harris TB, Kipnis V, Mouw T, Ballard-Barbash R, Hollenbeck A, Leitzmann MF. Overweight, obesity, and mortality in a large prospective cohort of persons 50 to 71 years old. *N Engl J Med*. 2006;355:763-778.

Pereira MA, Kartashov AI, Ebbeling CB, Van Horn L, Slattery ML, Jacobs DR Jr, Ludwig DS. Fast-food habits, weight gain, and insulin resistance (the CARDIA study): 15-year prospective analysis. *Lancet*. 2005;365:36-42. Erratum in: *Lancet*. 2005;365:1030.

Millen BE, Pencina MJ, Kimokoti RW, Zhu L, Meigs JB, Ordovas JM, D'Agostino RB. Nutritional risk and the metabolic syndrome in women: opportunities for preventive intervention from the Framingham Nutrition Study. *Am J Clin Nutr*. 2006;84:434-441.

Zemel MB, Thompson W, Milstead A, Morris K, Campbell P. Calcium and dairy acceleration of weight and fat loss during energy restriction in obese adults. *Obes Res*. 2004;12:582-590.

Harvey-Berino J, Gold BC, Lauber R, Starinski A. The impact of calcium and dairy product consumption on weight loss. *Obes Res*. 2005;13:1720-1726.

**Week 12 (Nov 30 '06) – Diet and heart disease, hypertension**

Hung HC, Joshipura KJ, Jiang R, Hu FB, Hunter D, Smith-Warner SA, Colditz GA, Rosner B, Spiegelman D, Willett WC. Fruit and vegetable intake and risk of major chronic disease. *J Natl Cancer Inst*. 2004;96:1577-1584.

Lonn E, Yusuf S, Arnold MJ, Sheridan P, Pogue J, Micks M, McQueen MJ, Probstfield J, Fodor G, Held C, Genest J Jr; Heart Outcomes Prevention Evaluation (HOPE) 2 Investigators. Homocysteine lowering with folic acid and B vitamins in vascular disease. *N Engl J Med*. 2006;354:1567-1577. Erratum in: *N Engl J Med*. 2006;355:746.

Harsha DW, Lin PH, Obarzanek E, Karanja NM, Moore TJ, Caballero B. Dietary Approaches to Stop Hypertension: a summary of study results. DASH Collaborative Research Group. *J Am Diet Assoc*. 1999;99(8 Suppl):S35-S39.

Elmer PJ, Obarzanek E, Vollmer WM, Simons-Morton D, Stevens VJ, Young DR, Lin PH, Champagne C, Harsha DW, Svetkey LP, Ard J, Brantley PJ, Proschan MA, Erlinger TP, Appel LJ; PREMIER Collaborative Research Group. Effects of comprehensive lifestyle modification on diet, weight, physical fitness, and blood pressure control: 18-month results of a randomized trial. *Ann Intern Med*. 2006;144:485-495.

Estruch R, Martinez-Gonzalez MA, Corella D, Salas-Salvado J, Ruiz-Gutierrez V, Covas MI, Fiol M, Gomez-Gracia E, Lopez-Sabater MC, Vinyoles E, Aros F, Conde M, Lahoz C, Lapetra J, Saez G, Ros E; PREDIMED Study Investigators. Effects of a Mediterranean-style diet on cardiovascular risk factors: a randomized trial. *Ann Intern Med*. 2006;145:1-11.

**Week 13 (Dec 7 '06) – Diet and cancer**

Goodman GE, Thornquist MD, Balmes J, Cullen MR, Meyskens FL Jr, Omenn GS, Valanis B, Williams JH Jr. The Beta-Carotene and Retinol Efficacy Trial: incidence of lung cancer and cardiovascular disease mortality during 6-year follow-up after stopping beta-carotene and retinol supplements. *J Natl Cancer Inst.* 2004;96:1743-1750.

Miller ER 3rd, Pastor-Barriuso R, Dalal D, Riemersma RA, Appel LJ, Guallar E. Meta-analysis: high-dosage vitamin E supplementation may increase all-cause mortality. *Ann Intern Med.* 2005;142:37-46.

Klein EA. Selenium and vitamin E cancer prevention trial. *Ann N Y Acad Sci.* 2004;1031:234-241.

Garland CF, Garland FC, Gorham ED, Lipkin M, Newmark H, Mohr SB, Holick MF. The role of vitamin D in cancer prevention. *Am J Public Health.* 2006;96:252-261.

Schabath MB, Hernandez LM, Wu X, Pillow PC, Spitz MR. Dietary phytoestrogens and lung cancer risk. *JAMA.* 2005;294:1493-1504. Erratum in: *JAMA.* 2005;294:2700.

**Week 14 (Dec 12 '06) – Review****Week 15 (Dec 21 '06) – FINAL EXAM**

## Websites for E33.2192 Nutritional Epidemiology

### Dietary Collection and Analysis Software used for 24-hour Dietary Recalls and Food Records

- ESHA Food Processor. <http://www.esharesearch.com/products/foodpro>
- Minnesota Nutrition Data System for Research. [www.ncc.umn.edu](http://www.ncc.umn.edu)
- University of Texas Food Intake Analysis System (FIAS). <http://www.sph.uth.tmc.edu/hnc/FIAS/fiasbasic.htm>
- USDA Nutrient Data Laboratory (where you can search the USDA Nutrient Database for Standard Reference). [www.nal.usda.gov/fnic/foodcomp/](http://www.nal.usda.gov/fnic/foodcomp/)

### Food Frequency Questionnaires

- Berkeley Nutrition Services: Fruit, vegetable, fiber screener; Fat screener (developed by Block). [www.nutritionquest.com](http://www.nutritionquest.com)
- Dietary Assessment at the National Cancer Institute (including the Diet History Questionnaire, the Dietary Assessment Calibration/Validation Register, Fruit and Vegetable Screener, % Energy from Fat Screener). <http://riskfactor.cancer.gov/diet/>

### International Sites

- The International Network of Food Data Systems. [www.fao.org/infoods/](http://www.fao.org/infoods/)

### U.S. Dietary Guidance

- Center for Nutrition Policy and Promotion (site for The Dietary Guidelines for Americans, The Food Guide Pyramid, The Interactive Healthy Eating Index). [www.usda.gov/cnpp/](http://www.usda.gov/cnpp/)
- Index of Food and Nutrition Internet Resources, Food and Nutrition Information Center, USDA. <http://www.nal.usda.gov/fnic/etext/fnic.html>
- Nutrition Monitoring in the U.S. The directory of federal and state nutrition monitoring and related research activities. [www.cdc.gov/nchswww/about/otheract/nutrishn/nutrishn.htm](http://www.cdc.gov/nchswww/about/otheract/nutrishn/nutrishn.htm)

### U.S. Health and Nutrition Surveys

- Food Surveys Research Group (who conduct the Continuing Survey of Food Intakes by Individuals, CSFII). [www.barc.usda.gov/bhnrc/foodsurvey/home.htm](http://www.barc.usda.gov/bhnrc/foodsurvey/home.htm)
- National Center for Health Statistics, Center for Disease Control and Prevention (who conduct the National Health and Nutrition Examination Surveys, NHANES, and the National Health Interview Surveys, NHIS). [www.cdc.gov/nchs/about.htm](http://www.cdc.gov/nchs/about.htm)