

# BEHAVIORAL SCIENCE IN CANCER PREVENTION AND CONTROL

Time: Monday 6-9

Location: Preventive Medicine

Course Instructor: Melinda Stolley, Ph.D.  
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## I. Course Description

The purpose of this course to review the basic concepts and issues relevant to behavioral science in cancer prevention and control. Specifically this course will introduce the major theoretical models used in behavioral science, provide information on the behavioral risk factors for cancer, briefly review the major behavioral clinical trials in cancer prevention and control, and address measurement issues in behavioral studies.

## II. Prerequisites

None.

## III. Course Objectives

After completion of the course, students will be able to:

- Describe the rationale for addressing behaviors in cancer prevention and control research.
- Describe the major theoretical models for behavioral research in cancer prevention and control.
- Identify behavioral risk factors for cancer.
- Describe behavioral trends among ethnic/racial groups
- Describe the strengths and weaknesses of various behavioral intervention trials.
- Describe major categories of measures for behavioral research and identify their strengths and weaknesses.

## IV. Teaching Format

The classes will be divided into two major parts. The first part will include an introduction to the scientific evidence for a particular behavioral risk factor and cancer. The second part of class will provide an overview of significant clinical trials that address the particular risk factor. Throughout the class, students will be encouraged to think critically about the readings and offer creative ideas about ways to address behaviors in cancer prevention and control. Each week students will be assigned readings and expected to take responsibility in presenting one of the assigned readings.

## **V. Student Evaluation**

Class Participation: Students are expected to come to class prepared to take part in class discussion. Participation will count towards 20% of the grade. If you will miss a class, you must notify the Instructor in advance.

Weekly Reading Presentation: Each week at least one student will take responsibility for leading the discussion on the readings. (30%)

Final Paper: Students will be expected to choose a topic related to the behavioral sciences in cancer prevention and control and write a final paper. More details will be given on the first day of class. The final paper will count towards 50% of the grade.

## **VI. Class Materials**

- Readings will be provided by the Instructor prior to the first day of class and throughout the course.

## **VII. Course Evaluation**

The MPH Program administers web-based course evaluations to students for each course near the end of the course. Your completion of both the unit (course) and faculty evaluation components is required; failure to complete either of the evaluations will result in an incomplete grade until the evaluations are submitted. You will be sent the web link and instructions via email later in the course. You will have about two weeks time to complete the evaluations before grades are submitted.

**Summer 2005**  
**Behavioral Science in Cancer Prevention and Control**

<b>Session</b>	<b>Topic</b>
<b>1</b>	<b>Intro to Behavioral Science and Cancer Prevention/Control Theoretical Models in Behavioral Science</b>
<b>2</b>	<b>Nutrition and Cancer Prevention/Control</b>
<b>3</b>	<b>Physical Activity and Cancer Prevention/Control</b>
<b>4</b>	<b>Tobacco (Guest Lecturer)</b>
<b>5</b>	<b>Screening and Cancer Prevention/Control</b>

**Readings:**

**Week 1:**

Weinstein, N. Testing four competing theories of health-protective behavior. *Health Psychology*, 1993;12:324-333.

Stein CJ & Colditz GA. Modifiable risk factors for cancer. *British Journal of Cancer*, 2004;90:299-303.

Gotay CC. Behavior and cancer prevention. *Journal of clinical oncology*, 2005;23:301-310.

American Cancer Society. *Cancer prevention and early detection facts and figures*, 2005.

**Week 2:**

Key TJ, Allen NE, Spencer EA & Travis RC. The effect of diet on cancer. *The Lancet*, 2002;360: 861-868.

Willett WC. Diet and cancer: One view at the start of the millennium. *Cancer Epidemiology, Biomarkers & Prevention*, 2001;10:3-8.

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

Forman MR, Hursting SD, Umar A & Barrett JC. Nutrition and cancer prevention: A multidisciplinary perspective on human trials. *Annual Review of Nutrition*, 2004;24:223-54.

Thompson FE & Subar AF. Dietary assessment methodology. *Nutrition in the prevention and treatment of disease*. Coulston AM, Rock CL, Mosen ER (Eds), Academic Press, 2001.

**Week 3:**

Byers T, Nestle A, McTiernan A et al. American Cancer Society guidelines on nutrition and physical activity for cancer prevention: Reducing the risk of cancer with healthy food choices and physical activity. *CA Cancer Journal for Clinicians*, 2002;52:92-119.

Lee, I. Physical activity and cancer prevention – Data from epidemiologic studies. *Medicine and Science in Sport*, 2003;35:1823-7.

Westerland KC. Physical activity and cancer prevention – Mechanisms. *Medicine and Science in Sport*, 2003;35:1834-40.

McTiernan A. Intervention studies in exercise and cancer prevention. *Medicine and Science in Sport*, 2003;35:1841-45.

Courneya K. Exercise in cancer survivors: An overview of the research. *Medicine and Science in Sport*, 2003;35:1846-52.

**Week 4:****TBA****Week 5:**

Elmore JG, Armstrong K, Lehman CD, & Fletcher SW. Screening for breast cancer. *JAMA*, 2005; 293:1245-1256.

Walsh JM & Terdiman JP. Colorectal Cancer screening. *JAMA*, 2003;289:1288-1296

Waxman AG. Guidelines for cervical cancer screening: History and scientific rationale. *Clinical Obstetrics and Gynecology*, 2005;48:77-97.

Meissner HI, Smith RA, Rimer BK, Wilson K et al., Promoting cancer screening: Learning from experience. *Cancer*, 2004; 101 (5S):1107-17.

Pasick RJ, Hiatt RA & Paskett ED. Lessons learned from community-based cancer screening intervention research. *Cancer*, 2004; 101 (5S):1146-64.

Peek ME & Han JH. Disparities in screening mammography. *Journal of General Internal Medicine*, 2004; 19:184-194.