

BIOGRAPHICAL SKETCH

Provide the following information for the key personnel and other significant contributors in the order listed on Form Page 2.
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|---|----------------------------------|--------------------------------------|-------------------|
| NAME Anne McTiernan, M.D., Ph.D. | | POSITION TITLE Full Member | |
| eRA COMMONS USER NAME amctiern | | | |
| EDUCATION/TRAINING <i>(Begin with baccalaureate or other initial professional education, such as nursing, and include postdoctoral training.)</i> | | | |
| INSTITUTION AND LOCATION | DEGREE <i>(if applicable)</i> | YEAR(s) | FIELD OF STUDY |
| Boston University, Boston, Massachusetts | BA | 1974 | Sociology |
| State University of New York at Buffalo, New York | MA | 1976 | Medical Sociology |
| University of Washington, Seattle, Washington | PhD | 1982 | Epidemiology |
| New York Medical College, Valhalla, New York | MD | 1989 | Medicine |

A. Positions and Honors

Positions and Employment

1983-1985 Staff Scientist, Fred Hutchinson Cancer Research Center (FHCRC), Seattle, WA
1989-1992 Internship & Residency Primary Care Internal Medicine, U. of Washington (UW), Seattle, WA
1992-2001 Senior Staff Scientist, Associate Member, FHCRC, Seattle, WA
1992-1995 Clinical Instructor, Epidemiology and Medicine, UW, Seattle
1996-2003 Research and Associate Assistant Professor, Epidemiology, UW School of Public Health
2001- Full Member, FHCRC, Seattle, WA
2003- Research Professor, Epidemiology and Medicine, UW, Seattle, WA
2003- Director, FHCRC Prevention Center

Selected Honors and International Committees

NIH PRDP Study Section, Member, 2008
DHHS, Physical Activity Guidelines Advisory Committee, 2007-2008
Fellow: American College of Sports Medicine; Member, Research Review Committee
Fellow: North American Association for Study of Obesity; Chair Cancer Interest Group
Chair, Mechanisms, IARC Handbooks of Cancer Prevention Vol 6: Weight Control & Physical Activity, 2002
Chair, NIH Special Study Section "Mechanisms of Physical Activity Change" March 2004

B. Selected peer-reviewed publications (42 of 212)

1. McTiernan A, Ulrich N, Slate S, Potter J. Physical activity and cancer etiology: associations and mechanisms. Cancer Causes and Control 1998;9(5):487-509.
2. McTiernan A. The associations of energy balance and body mass index with breast cancer risk in United States women from diverse racial and ethnic backgrounds. Cancer 2000;88:1248-1255.
3. Chlebowski RT, Aiello E, McTiernan A. Weight Loss in Breast Cancer Patient Management. J. Clinical Oncology 2002;20(4):1128-1143.
4. Irwin M, Yasui Y, Ulrich CM, Bowen D, Rudolph RE, Schwartz RS, Yukawa M, Potter JD, McTiernan A. Effect of exercise on total and intra-abdominal body fat in postmenopausal women: A randomized controlled trial. JAMA 289:323-330, 2003.
5. Irwin M, Crumley D, McTiernan A, Berstein L, Baumgartner R, Gilliland F, Kriska A, Ballard Barbash R. Physical activity levels before and after a diagnosis of breast cancer: The Health, Eating, Activity, and Lifestyle (HEAL) Study. Cancer 2003;97:1746-57.
6. McTiernan A, Rajan B, Tworoger S, et al. Adiposity and Sex Hormones in Postmenopausal Breast Cancer Patients. J Clinical Oncology. 2003;21(10):1961-1966.
7. McTiernan A. Intervention Studies in Exercise and Cancer Prevention. (American College of Sports Medicine Symposium paper). MSSE. 2003, 35(11):1841-45.

8. Tworoger S, Yasui Y, Ulrich CM, Vitiello M, Bowen D, Irwin M, Aiello EJ, Schwartz RS, Potter J, McTiernan A. Effect of a yearlong moderate to vigorous intensity exercise or low intensity stretching intervention on self-reported sleep quality measures in postmenopausal women. Sleep 2003, 26(7): 830-6.
9. McTiernan A, Kooperberg C, White E, Wilcox S, Coates R, Adams-Campbell L, Woods N, Ockene J. Recreational Physical Activity and the Risk of Breast Cancer in Postmenopausal Women. The Women's Health Initiative Cohort Study. JAMA 2003; 290: 1331-36.
10. Brown JK, Byers T, Doyle C, Courneya KS, Demark-Wahnefried W, Kushi LH, McTiernan A, et al, Nutrition and Physical Activity During and After Cancer Treatment: An American Cancer Society Guide for Informed Choices. CA Cancer J Clin. 2003 Sep-Oct;53(5):268-91.
11. McTiernan A, Tworoger S, Schwartz RS, Ulrich CM, Yasui Y, Irwin M, Rajan B, Rudolph R, Bowen D, Stanczyk F, Potter JD. Effect of Exercise on Serum Estrogen in Postmenopausal Women: a 12-Month Randomized Controlled Trial. Cancer Research 2004;64:2923-2928.
12. Tworoger SS, Chubak J, Aiello EJ, Yasui Y, Ulrich CM, Farin FM, Stapleton PL, Irwin ML, Potter JD, Schwartz RS, McTiernan A. The effect of CYP19 and COMT polymorphisms on exercise-induced fat loss in postmenopausal women. Obesity Research 2004;12(6):972-81.
13. Prentice R, Willett W, Greenwald P, Alberts D, Bernstein L, Boyd N, Byers T, Clinton S, Fraser G, Freedman L, Hunter D, Kipnis V, Kolonel L, Kristal B, Kristal A, Lampe J, McTiernan A, Milner J, Patterson R, Potter J, Riboli E, Schatzkin A, Yates A. Nutrition, Physical Activity and Chronic Disease Prevention: Research Strategies and Recommendations. JNCI 2004; 96(17):1276-87.
14. Shade ED, McTiernan A, Wener MH, Wood B, Yasui Y, LaCroix K, Potter JD, Ulrich CM. Frequent intentional weight loss, duration of weight stability, and possible long-term effects on immune function. J American Dietetic Association June 2004; 104(6): 903-12.
15. Irwin M, McTiernan A, Bernstein L, Baumgartner R, Gilliland FD, Ballard-Barbash R. Physical activity levels across the breast cancer experience: The Health, Eating, Activity, and Lifestyle (HEAL) Study. MMSE 2004; 36(9): 1484-1491.
16. Tworoger SS, Chubak J, Aiello EJ, Yasui Y, Ulrich CM, Farin FM, Stapleton PL, Irwin ML, Potter JD, Schwartz RS, McTiernan A. The effect of CYP19 and COMT polymorphisms on exercise-induced fat loss in postmenopausal women. Obesity Research 2004;12(6):972-81.
17. Irwin ML, McTiernan A, Baumgartner R, Baumgartner K, Bernstein L, Gilliland FD, Ballard-Barbash R. Changes in body fat and weight after a breast cancer diagnosis: Influence of demographic, prognostic and lifestyle factors. J Clin Oncol 2005;23(4):774-782.
18. Chubak J, Ulrich CM, Tworoger SS, Sorensen B, Yasui Y, Irwin ML, Stanczyk FZ, Potter JD, McTiernan A. Effect of exercise on bone density and lean mass in postmenopausal women. MMSE. 2006;38(7):1236-1244.
19. McTiernan A, Yasui Y, Sorensen B, Irwin ML, Morgan A, Rudolph RE, Surawicz C, Lampe JW, Ayub K, Potter J, Lampe P. Effect of a 12-month exercise intervention on patterns of cellular proliferation in colonic crypts: a randomized controlled trial. CEBP 2006; 15: 1588-1597.
20. Irwin ML, Aiello E, McTiernan A, Bernstein L, Gilliland F, Baumgartner RN, Baumgartner KB, Ballard-Barbash R. Physical Activity, Body Mass Index and Mammographic Density in Postmenopausal Breast Cancer Survivors. JCO 2007 Mar 20;25(9):1061-6.
21. McTiernan A, Sorensen B, Irwin M, Morgan A, Yasui Y, Lampe J, Lampe P, Rudolph R, Surawicz C, Ayub K, Potter J. Exercise effect on weight and body fat in men and women. Obesity 2007;25(6)1496-1512.
22. Campbell KL, McTiernan A, Li SS, Sorensen BE, Yasui Y, Lampe JW, King IB, Ulrich CM, Rudolph RE, Irwin ML, Surawicz C, Ayub K, Potter JD, Lampe PD. Effect of a 12-month exercise intervention on apoptotic regulating proteins Bax and Bcl-2 in colon crypts: A randomized controlled trial. CEBP 2007 16(9):1767-74.
23. Boynton A, Neuhauser ML, Wener MH, Wood B, Sorensen B, Chen-Levy Z, Kirk EA, Yasui Y, LaCroix K, McTiernan A, and Ulrich CM. Associations between healthy eating patterns and immune function or inflammation in overweight or obese postmenopausal women. AJCN 2007; 86(5):1445-55.
24. McTiernan A. Mechanisms linking physical activity with cancer. Nat Rev Cancer. 2008 Mar;8(3):205-11.
25. Hawkins V, Foster-Schubert K, Chubak J, Sorensen B, Ulrich CM, Stanczyk FZ, Plymate S, Stanford J, White E, Potter JD, McTiernan A. Effect of Exercise of Serum Sex Hormones in Men: A 12-Month Randomized Clinical Trial. MSSE 2008 Feb;40(2):223-223.

26. Boynton A, Neuhouser ML, Sorensen B, McTiernan A, Ulrich CM. Predictors of Diet Quality among Postmenopausal Women. J Am Diet Assoc 2008 Jan;108(1):125-30.
27. **Hawkins V, Foster-Schubert K, Chubak J, Sorensen B, Ulrich CM, Stanczyk FZ, Plymate S, Stanford J, White E, Potter JD, McTiernan A. Effect of Exercise on Serum Sex Hormones in Men: A 12-Month Randomized Clinical Trial. MSSE 2008 Feb;40(2):223-233.
28. Prentice R, Chlebowski R, Stefanick M, Manson J, Langer R, Pettinger M, Hendrix S, Hubbell A, Kooperberg C, Kuller L, Lane D, McTiernan A, O'Sullivan MJ, Anderson G. Estrogen plus progestin therapy and breast cancer among recently postmenopausal women. Am J Epidemiology 2008 Mar 27;
29. McTiernan A, Wu L, Barnabei VM, Chen C, Hendrix S, Modugno F, Rohan T, Stanczyk FZ, Wang CY. Relation of Demographic Factors, Menstrual History, Reproduction and Medication Use to Sex Hormone Levels in Postmenopausal Women. Breast Cancer Research and Treatment 2008 Mar;108(2):217-231. Epub 2007 May 22.
30. McTiernan A. Mechanisms linking physical activity with cancer. Nat Rev Cancer. 2008 Mar;8(3):205-11.
31. Campbell PT, Wener MH, Sorensen B, Wood B, Potter JD, McTiernan A, Ulrich CM. Effect of exercise on in vitro immune function: a 12-month randomized controlled trial among postmenopausal women. Journal of Applied Physiology 2008 Jun;104(6):1648-55. [PMID: 18403448]
32. Rohan T, Negassa A, Chlebowski RT, Lasser N, McTiernan A, Schenken R, Wassertheil-Smoller S, Page DL. Estrogen and risk of benign proliferative breast disease. JNCI 2008; 100(8):563-71.
33. Irwin ML, Smith AW, McTiernan A, Ballard-Barbash R, Cronin K, Gilliland FD, Baumgartner RN, Baumgartner KB, Bernstein L. Association of pre- and post-diagnosis physical activity with mortality in breast cancer survivors: The Health Eating Activity and Lifestyle (HEAL) Study. J Clin Onc 2008;26:3958-3964. [PMID: 18648952]
34. Hall KL, Stokols D, Moser RP, Taylor BK, Thornquist M, Nebeling L, Ehret C, Barnett M, McTiernan A, Berger NA, Goran M, Jeffery R. The Collaboration Readiness of Transdisciplinary Research Teams and Centers: Findings from the National Cancer Institute TREC Year –One Evaluation Study. Am J Prev Med (Suppl) 2008 Aug;35(2 Suppl):S161-72. [PMID: 18619396]
35. Campbell KL, Campbell PT, Ulrich CM, Wener MW, Alfano CM, Foster-Schubert KE, Rudolph RE, Potter JD, McTiernan A. Effect of a 12-month randomized controlled trial of exercise on C-reactive protein among men and women. CEBP 2008 Jul;17(7):1714-8. [PMID: 18628422]
36. Hawk ET, Greenwood A, Gritz ER, McTiernan A, Sellers T, Hursting SD, Leischow S, Grad O, for the Translational Research Working Group. The Translational Research Working Group Developmental Pathway for Lifestyle Alterations. Clin Cancer Res 2008;14 5707-5713 [PMID: 18794079]
37. Yip C-H, Smith RA, Anderson BO, Miller AB, Thomas DB, Ang E-S, Cafarella RS, Corbex M, Kreps GL, McTiernan A., on behalf of the BHGI Early Detection Panel. Early detection and resource allocation in low and middle income countries. Cancer 2008;113(8):2244-2256. [PMID: 18837017]
38. McTiernan A, Porter P, Potter JD. Breast cancer prevention in countries with diverse resources. Cancer 2008; 113(8):2325-2330. [PMID: 18837024]
39. Wayne S, Neuhouser ML, Ulrich CM, Koprowski C, Wiggins C, Baumgartner KB, Bernstein L, Baumgartner RN, Gilliland FD, McTiernan A, Ballard-Barbash R. The association between alcohol intake and serum sex hormones and peptides differs by tamoxifen use in breast cancer survivors. CEBP 2008;17(11):3224-32. [PMID: 18957523]
40. Meyers JA, Liu, A.Y, McTiernan A, Wener MH, Wood B, Weigle DS, Sorensen B, Chen-Levy Z, Yasui Y, Boynton A, LaCroix K, Potter JD, Ulrich CM. Serum leptin concentrations and markers of immune function in overweight and obese postmenopausal women. Journal of Endocrinology 2008; 199: 51-60. [PMID: 18614715]
41. Duffy C, Assaf AL, Cyr M, Burkholder G, Coccio L, Rohan T, McTiernan A, Paskett E, Lane D, Chetty VK. Alcohol and folate intake and breast cancer risk in the WHI Observational Study. Breast Cancer Research & Treatment 2008 Sep 11. [Epub ahead of print, PMID: 18785003]
42. Campbell PT, Campbell KL, Wener M, Wood B, Sorensen B, Potter JD, A. McTiernan A, Ulrich CM. A yearlong exercise intervention decreases CRP among obese postmenopausal women. Medicine and Science in Sports and Exercise 2009 (PMC Journal – In Process)

C. Research Support

Ongoing Research Support

P30 CA015704 (Hartwell)

01/01/03 – 12/31/08 (renewal pending)

NIH/NCI

Cancer Center Support Grant (Comprehensive) – Prevention Research Shared Resource

The Cancer Center Support Grant (CCSG) provides support for activities and resources critical to the promotion of interdisciplinary research in the FHCRC/UW Cancer Consortium.

R01 CA105204 (McTiernan)

09/01/04 – 08/31/09

NIH/NCI

Exercise, Diet, and Sex Hormones in Postmenopausal Women

This study will test and compare the effects on circulating sex hormones over one year of dietary weight loss and exercise, alone and together vs. control, in 503 postmenopausal women.

NCIC CTG Trial Map 3 (McTiernan)

09/16/04 – 09/16/15

NCIC (National Cancer Institute of Canada)

A Phase III Randomized Study of Exemestane versus Placebo in Postmenopausal Women at Increased Risk of Developing Breast Cancer

This multi-center placebo-controlled clinical trial is testing the effects of Exemestane on breast cancer incidence in high-risk postmenopausal women.

R01 HL079491 (Beresford)

9/30/04 – 06/30/09

NIH

Reducing Obesity at the Workplace: A Randomized Trial

This study tests an intervention of messages that will integrate changes in dietary intake with changes in energy expenditure, while simultaneously modifying structural and environmental factors to promote social support and opportunities for behavioral change. The primary aim is to evaluate the effectiveness of the intervention in reducing or maintaining body mass index in a randomized controlled trial of worksites.

U54 CA116847 (McTiernan)

09/23/05 – 08/31/10

NIH

Mechanisms of Energy Balance and Cancer Prevention

The Seattle TREC Center proposes to elucidate the pathways linking components of energy balance to the cancer process using several different study designs, with the transdisciplinary contributions of scientists from medicine, cell biology, animal models, immunology, biostatistics, mathematics, exercise physiology, and behavioral science. The overarching theme of the Seattle TREC Center will be determining the mechanisms by which energy balance modifies and influences the process of carcinogenesis.

N01-PC-8513-20 (McTiernan)

09/30/098-09/29/09

NIH/NCI

SEER – Special Study #9: Weight, Physical Activity, Diet and Breast Cancer Prognosis (HEAL)10-Year

Follow-Up Study: The purpose of the HEAL Follow-up Study is to examine the correlation between diet, physical activity, weight, endogenous hormones and tumor characteristics, and breast cancer recurrence and survival.

R21 CA131676 (Ulrich, PI)

05/01/08 – 04/30/10

NIH

Effect of exercise and weight loss on adipose tissue biology

The proposed project will examine the intersection between energy balance -- specifically diet, physical activity and weight changes -- and adipose tissue biology.