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## BIOGRAPHICAL SKETCH

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NAME Blair, Steven N.		POSITION TITLE Professor	
eRA COMMONS USER NAME Steven39			
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
Kansas Wesleyan University	B.A.	1962	Phys. Educ. & Biology
Indiana University	M.S.	1965	Physical Education
Indiana University	P.E.D.	1968	Physical Education
Stanford University School of Medicine	Post-doc	1978-80	Prev. Cardiology

### A. Summary

Steven N. Blair is one of the most highly cited investigators in exercise science, currently with more than 20,000 total citations of his work and with a current annual increase of ~2000 citations/year. His 1989 *JAMA* paper (262 (17): 2395-2401) is one of the most highly cited papers in the exercise science literature. It has been cited >1200 times and is still being cited >50 times/year. He has been the PI on 5 randomized controlled trials (RCTs) of exercise funded by NIH. The most highly cited paper from these trials is (*JAMA* 1999; 281 (4): 327-334) which has been cited ~300 times. Three other RCT papers have been cited ~100 times. He is highly experienced in the organization and management of controlled clinical trials and epidemiological studies, and is well qualified to direct the projects proposed in this application.

### B. Positions and Honors.

#### Positions and Employment

1973-1978	Co-PI and Project Director, Columbia Center of the Multiple Risk Factor Intervention Trial; responsible for staff supervision, administration, and intervention activities
1978-1980	Post-doctoral Scholar and Visiting Senior Research Fellow, Stanford Heart Disease Prevention Program (SHDPP)
1966-1985	Instructor to Professor, School of Public Health, University of South Carolina, Columbia
1980-2002	Director of Epidemiology and Clinical Applications, The Cooper Institute, Dallas, Texas
2002-2006	President & CEO, The Cooper Institute, Dallas, Texas
2006	The Fred and Barbara Meyer Chair in Preventive Medicine, The Cooper Institute, Dallas, TX
2006-present	Professor, Departments of Exercise Science and Epidemiology and Biostatistics, Arnold School of Public Health, University of South Carolina, Columbia, SC

#### Selected List of Honors

1996	U.S. Surgeon General's Medallion
2002	NIA MERIT Award
2002	Doctor of Science <i>Honoris Causa</i> , University of Bristol, England
2003	American College of Sports Medicine Honor Award
2008	American Heart Association Population Science Award

Invited to deliver 20+ named lectures in the U.S., U.K., Canada, Australia, and Germany, including:

- The Wenner-Wingate Lecture, McDaniel College, Westminster, MD, 2006.
- Robert S. Gordon, Jr. Lecture. National Institutes of Health, Bethesda, MD, 2006.
- Joseph B. Wolfe Lecture. American College of Sports Medicine, Denver, CO, 2006.
- Robert I. Levy Endowed Lecture in Lipid Metabolism. American Heart Association, Chicago, IL, 2006.
- International 19<sup>th</sup> Puijo Symposium Honorary Lecture, University of Kuopio, FINLAND.

### B. Selected peer-reviewed publications (in chronological order from a total of more than 430).

1. Pate RR, Pratt M, Blair SN, Haskell WL, et al. Physical activity and public health. A recommendation from the CDC and ACSM. *JAMA* 273: 402-407, 1995.
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2. Blair SN, Kampert JB, Kohl HW, III, Barlow CE, Macera CA, Paffenbarger RS, Jr., Gibbons LW. Influences of cardiorespiratory fitness and other precursors on cardiovascular disease and all-cause mortality in men and women. *JAMA* 1996; 276:205-10.
  3. Dunn, AL, Marcus, BH, Kampert, JB, Garcia, ME, Kohl, HW, III, Blair, SN. Comparison of lifestyle and structured interventions to increase physical activity and cardiorespiratory fitness: A randomized trial. *JAMA* 1999; 281:327-334.
  4. Wei M, Kampert JB, Barlow CE, Nichaman MZ, Gibbons LW, Paffenbarger RSJ, Blair SN. Relationship between low cardiorespiratory fitness and mortality in normal-weight, overweight, and obese men. *JAMA* 1999; 282:1547-1553.
  5. Wei M, Gibbons LW, Kampert JB, Nichaman MZ, Blair SN. Low cardiorespiratory fitness and physical inactivity as predictors of mortality in men with type 2 diabetes. *Ann Intern Med* 2000; 132:605-611.
  6. The Writing Group for the Activity Counseling Trial Research Group. Effects of physical activity counseling in primary care: the Activity Counseling Trial: A randomized controlled trial. *JAMA* 2001; 286(6):677-687.
  7. Nguyen-Duy, TB, Nichaman, MZ, Church, TS, Blair, SN, Ross R. Visceral fat and liver fat are independent predictors of metabolic risk factors in men. *Appl J Physiology* 2003; 284:E1065-1072.
  8. Church TS, Cheng YJ, Earnest CP, Barlow CE, Gibbons LW, Priest EL, Blair SN. Exercise capacity and body composition as predictors of mortality among men with diabetes. *Diabetes Care*. 2004; 27(1):83-8.
  9. Blair SN, Church TS. The Fitness, Obesity, and Health Equation: Is Physical Activity the Common Denominator? (Editorial) *JAMA* 2004; 292:1232-1234.
  10. Barlow CE, LaMonte MJ, FitzGerald SJ, Kampert JB, Perrin JL, Blair SN. Cardiorespiratory Fitness Is an Independent Predictor of Hypertension Incidence among Initially Normotensive Healthy Women. *Am J Epidemiol*. 2006;163:142-150.
  11. Katzmarzyk PT, Janssen I, Ross R, Church TS, Blair SN. The Importance of Waist Circumference in the Definition of Metabolic Syndrome: Prospective analyses of mortality in men. *Diab Care*. 2006;29:404-409.
  12. Kuk JL, Katzmarzyk PT, Nichaman MZ, Church TS, Blair SN, Ross R. Visceral Fat Is an Independent Predictor of All-cause Mortality in Men. *Obes Res*. 2006;14:336-341.
  13. Church TS, Kuk JL, Ross R, Priest EL, Biltoff E, Blair SN. Association of cardiorespiratory fitness, body mass index, and waist circumference to nonalcoholic Fatty liver disease. *Gastroenterology*. 2006;130:2023-2030.
  14. Blair SN, Haskell WL. Objectively measured physical activity and mortality in older adults. *JAMA* 2006; 296:216-18.
  15. Church TS, Earnest CP, Skinner JS, Blair SN. Effects of different doses of physical activity on cardiorespiratory fitness among sedentary, overweight or obese postmenopausal women with elevated blood pressure. *JAMA* 2007; 297:2081-91.
  16. Ness AR, Leary SD, Mattocks C, Blair SN, Reilly JJ, Wells J, Ingle S, Tilling K, Davey Smith G, Riddoch C. Objectively measured physical activity and fat mass in a large cohort of children. *PLOS Med* 2007; 4(3): e97.
  17. Van Wye G, Dubin JA, Blair SN, and Di Pietro L. A History of Weight Cycling and 6-Year Weight Change in Healthy Adults: The Aerobics Center Longitudinal Study. *Obesity* 2007; 15:731-9.
  18. Sui X, LaMonte MJ, Blair SN. Cardiorespiratory fitness as a predictor of nonfatal cardiovascular events in asymptomatic women and men. *Am J Epidemiol* 2007; 165:1414-23.
  19. Sui X, LaMonte MJ, Blair SN. Cardiorespiratory fitness and risk of nonfatal cardiovascular disease in women and men with hypertension. *Am J Hypertension* 2007; 20:608-15.
  20. Haskell WL, Lee IM, Pate RR, Powell KE, Blair SN, Franklin BA, Macera CA, Heath GW, Thompson PD, Sui X, LaMonte MJ, Laditka JN, Hardin JW, Chase N, Hooker SP, Blair SN. Cardiorespiratory fitness and adiposity as mortality predictors in older adults. *JAMA* 2007; 298:2507-16.
  21. Riddoch CJ, Mattocks C, Deere K, Saunders J, Kirkby J, Tilling K, Leary SD, Blair SN, and Ness AR. Objective measurement of levels and patterns of physical activity. *Arch Dis Child* 2007; **92**: 963-9.
  22. Sui X, Hooker SP, Lee IM, Church TS, Colabianchi N, Lee CD, Blair SN. A prospective study of cardiorespiratory fitness and risk of type 2 diabetes in women. *Diabetes Care* 2008; 31:550-5.
  23. Mattocks D, Ness A, Leary S, Tilling K, Blair SN, et al. Use of accelerometers in a large field-based study of children: Protocols, design issues, and effects on precision. *J Phys Act Health* 2008; 5 Suppl 1: S98-111.
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25. Mikus CR, Earnest CP, Blair SN, Church TS. Heart rate and exercise intensity during training: Observations from the DREW Study. *Br J Sports Med* 2008 Apr 7, Epub ahead of print.
  26. Shuger SL, Sui X, Church TS, Meriwether RA, Blair SN. Body mass index as a predictor of hypertension incidence among initially health normotensive women. *Am J Hypertens* 2008; 21(6): 613-9.
  27. Lyerly GW, Sui X, Church TS, Lavie CJ, Hand GA, Blair SN. Maximal exercise electrocardiography responses and coronary heart disease mortality among men with diabetes mellitus. *Circulation* 2008; 117(21):2734-42.
  28. Sui S, Church TS, Meriwether RA, Lobelo F, Blair SN. Uric acid and the development of metabolic syndrome in women and men. *Metabolism* 2008; 57(6): 845-52.
  29. Earnest CP, Lavie CJ, Blair SN, Church TS. Heart rate variability characteristics in sedentary postmenopausal women following six months of exercise training: The DREW Study. *PLoS One* 2008; 3(6):e2288.
  30. Kuk JL, Church TS, Blair SN, Ross R. Associations between changes in abdominal and thigh muscle quantity and quality. *Med Sci Sports Exerc* 2008; 40(7):1277-81.
  31. Ruiz JR, Sui X, Lobelo F, Morrow JR, Jackson AW, Sjostrom M, Blair SN. Association between muscular strength and mortality in men: Prospective cohort study. *BMJ* 2008; 337: a439. PMC ID – PMC2453303
  32. Payn T, Pfeiffer KA, Hutto B, Vena JE, LaMonte MJ, Blair SN, Hooker SP. Daily steps in midlife and older adults: Relationship with demographic, self-rated health, and self-reported physical activity. *Res Q Exerc Sport* 2008; 79(2): 128-32.
  33. Hooker SP, Sui S, Colabianchi N, Vena J, Laditka J, LaMonte MJ, Blair SN. Cardiorespiratory fitness as a predictor of fatal and nonfatal stroke in asymptomatic women and men. *Stroke* 2008; Aug 7, epub ahead of print.
  34. Mattocks C, Deere K, Ness A, Tilling K, Blair SN, Riddoch C. Early life determinants of physical activity in 11 to 12 year olds: Cohort study. *Br J Sports Med* 2008; 42(9): 721-4.
  35. Rankinen T, Church T, Rice T, Markward N, Blair SN, Bouchard C. A major haplotype block at the rho-associated kinase 2 locus is associated with a lower risk of hypertension in a recessive manner: The HYPGENE Study. *Hypertens Res* 2008; 31(8): 1651-7. PMC ID – PMC2596921
  36. Sui X, Laditka JN, Church TS, Hardin JW, Chase N, Davis K, Blair SN. Prospective study of cardiorespiratory fitness and depressive symptoms in women and men. *J Psychiatr Res* 2008 Oct 7, epub ahead of print.
  37. Johannsen NM, Priest EL, Dixit VD, Earnest CP, Blair SN, Church TS. Association of white blood cell subfraction concentration with fitness and fatness. *Br J Sports Med* 2008, epub ahead of print.
  38. Lee DC, Sui X, Church TS, Lee IM, Blair SN. Associations of cardiorespiratory fitness and obesity on risks of impaired fasting glucose and type 2 diabetes in men. *Diabetes Care* 2008, epub ahead of print.
  39. Ross R, Blair SN, Godwin M, Hotz S, Katzmarzyk PT, Lam MY, Levesque L, MacDonald S. Prevention and reduction of obesity through active living (PROACTIVE): Rationale, design, and methods. *Br J Sports Med* 2008, epub ahead of print.
  40. Donnelly JP, Blair SN, Jakicic JM, Manore MM, Rankin JW, Smith BK. ACSM Position Stand. Appropriate physical activity intervention strategies for weight loss and prevention of weight regain for adults. *Med Sci Sports Exerc* 2009; 41(2):459-71.
  41. Dwyer T, Magnussen CG, Schmidt MD, Ukoumunne OC, Ponsonby AL, Raitakari OT, Zimmet PA, Blair SN, Thomson R, Cleland VJ, Venn A. Decline in physical fitness from childhood to adulthood associated with increased obesity and insulin resistance in adults. *Diabetes Care* 2009; 32(4): 683-7. PMC ID – PMC2660487
  42. Murphy MH, Blair SN, Murtagh EM. Accumulated versus continuous exercise for health benefit: A review of empirical studies. *Sports Med* 2009; 39(1):29-34.
  43. Martin CK, Church TS, Thompson AM, Earnest CP, Blair SN. Volume of exercise and fitness nonresponse in sedentary, postmenopausal women. *Med Sci Sports Exerc* 2009 Feb 9, epub ahead of print.
  44. Church TS, Martin CK, Thompson AM, Earnest CP, Mikus CR, Blair SN. Changes in weight, waist circumference and compensatory responses with different doses of exercise among sedentary, overweight postmenopausal women. *PLoS ONE* 2009; 4(2):e4515, epub 2009 Feb 18. PMC ID -- PMC2639700.
  45. Mitchell JA, Mattocks C, Ness AR, Leary SD, Pate RR, Dowda M, Blair SN, Riddoch C. Sedentary behavior and obesity in a large cohort of children. *Obesity* 2009 Feb 26, epub ahead of print. PMCID – in process
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46. Peel JB, Sui X, Adams SA, Hebert JR, Hardin JW, Blair SN. A prospective study of cardiorespiratory fitness and breast cancer mortality. *Med Sci Sports Exerc* 2009; 41(4):742-8.
47. Peel JB, Sui X, Matthews CE, Adams SA, Hebert JR, Hardin JW, Church TS, Blair SN. Cardiorespiratory fitness and digestive cancer mortality: Findings from the Aerobics Center Longitudinal Study. *Cancer Epidemiol Biomarkers Prev* 2009; 18(4): 1111-7.
48. Blair SN, Morris JN. Healthy hearts – and the universal benefits of being physically active: Physical activity and health. *Ann Epidemiol* 2009; 19(4):253-6.
49. Ruiz JR, Sui X, Lobelo F, Lee DC, Morrow JR, Jackson AW, Hebert JR, Matthews, Sjoström M, Blair SN. Muscular strength and adiposity as predictors of adulthood cancer mortality in men. *Cancer Epidemiol Biomarkers Prev* 2009; 18(5):1468-76.
50. Heroux M, Janssen I, Lam M, Lee DC, Hebert JR, Sui X, Blair SN. Dietary patterns and the risk of mortality: Impact of cardiorespiratory fitness. *Int J Epidemiol* 2009; epub ahead of print.

**C. Research Support.**

**Ongoing Research Support**

Health Benefits of Swimming, (Blair, PI) 09/01/07 - 08/31/09  
 National Swimming Pool Foundation  
 This is an evaluation of swimming and health outcomes in the ACLS study.

Lifestyle Education for Activity & Nutrition, Body Media (Blair, PI) 11/01/07 - 03/31/10  
 This randomized clinical trial will evaluate various methods of weight loss intervention targeting diet and physical activity.

1 R01 HL071248-01A1 (Riddoch, PI; Blair, sub-contract PI) 05/02/03 - 04/30/10  
 NHLBI  
 Physical activity and childhood obesity

1 R01NS061846-01 (Hooker, PI) 09/30/08 – 07/31/13  
 NINDS  
 Impact of Physical Activity on Stroke and Cognitive Function in Older Adults

1 R24 MD002769 -01 (Hebert, PI) 08/01/08 – 03/31/13  
 NCMHHD  
 Diet and Activity Community Trial: High-risk Colon Polyps

**Recently Completed Research Support**

AG06945, Years 16-19, Blair (PI) 04/01/02 – 07/31/06  
 National Institutes of Health/National Institute on Aging  
 Impact of Physical Fitness and Exercise on Health

HL66262, Years 1-5, Blair (PI) 01/15/01 - 12/31/06  
 NIH/NHLBI  
 Dose-Response to Exercise in Women (DREW)

Subcontract #1-01U-9792 (Hershey J – PI; Blair – sub-contract PI) 09/19/05 - 09/18/08  
 Department of Defense  
 Weight Management Demonstration Program

1 R01AG22376-01, (Pahor, PI; Blair, sub-contract PI) 10/01/03 - 09/30/08  
 NIH/NIA Physical Exercise to Prevent Disability Pilot Study (The LIFE Study)