

Physical Activity Letter

Department of Kinesiology
Kansas State University

www.k-state.edu/kines

WINTER 2008-2009



Dear Friends:

Lack of physical activity is a major public health problem for children and adults. For the first time, a representative sample of the U.S. population was measured objectively on physical activity as part of the National Health and Nutritional Examination Survey. For this survey, participants wore an accelerometer. An accelerometer is like a pedometer, but more expensive and much more accurate. It is worn on the hip and measures movement throughout the day. According to this study of over 6,000 people, less than 5% of adults were adhering to the goal of 30 minutes of physical activity daily. Although this data is much lower than telephone surveys, objective data suggests that approximately 95% of adults in the U.S. do not meet physical activity guidelines.

We live in a society that is inactive. Clearly, we have a long way to go to improve the physical activity levels of children and adults. However, I am hopeful that we can bring out the best in people in the face of the national physical activity crisis and solve the problem. We need many individuals giving their time and talents to their communities to promote physical activity. As part of my appointment to the Kansas Governor's Council on Fitness, the Council is recognizing individuals who promote physical activity in their communities through a Hometown Health Hero award. If you know of someone who should be recognized, please contact me directly or go to www.healthykansas.org for more information.

The Department of Kinesiology is trying to do our part to promote physical activity through teaching, research and public service. Throughout this newsletter you will get a sample of some of our success stories. For instruction, we renovated part of the old men's locker room and have built a new teaching laboratory for anatomy and physiology. For research, we have been successful in attracting the best and brightest professors from across North American and have active projects funded by the National Institutes of Health, USDA, and numerous health foundations. And, the Department has been very active in public service like working with the Manhattan City Government to assist with making downtown Manhattan more walkable. We are also branching out and providing continuing educational and certification opportunities. Last Spring we offered the American College of Sport Medicine Health Fitness Instructor workshop and examination.

Please keep in touch with our Department and tell us how you are doing. Thank you for your support.

David A. Dzewaltowski, Ph.D.
Professor and Department Head



AHEARN FIELDHOUSE WAS SPARED BY THE JUNE 2008 TORNADO



Human Physiology Lab

Dr. Brett Wong joined the Department of Kinesiology in the Fall of 2007 from The University of Iowa. The Cardiovascular and Thermal Physiology Lab, under the direction of Dr. Wong, is focused on understanding the regulation of the cardiovascular system in response to various stressors. Brett's primary interest is understanding how humans regulate their body temperature during heat stress. Increases in sweating and skin blood flow are the primary physiological means by which humans regulate body temperature during heat stress; however, how skin blood flow increases during heat stress is unclear. Although heat-related fatalities are common in the elderly and those with chronic disease states, such as diabetes and cardiovascular disease, Brett's research is performed on young, healthy subjects so the basic underlying physiology can be investigated in the absence of confounding variables. The outcomes from experiments performed in Brett's lab have implications for reducing heat-related mortalities in susceptible populations. Using state-of-the-art techniques such as intradermal microdialysis and laser-Doppler flowmetry, current projects in Brett's lab are aimed at understanding how skin blood flow increases during heat stress in humans. A secondary focus of Dr. Wong's research is centered on understanding the cardiovascular response to changes in posture. When humans stand up, there is a large volume of blood that is displaced away from the heart and, if severe enough, can result in lightheadedness, dizziness, and possibly fainting. This line of research has practical implications for military fighter pilots, astronauts, or when someone "stands up too quickly."

Dr. Craig Harms joined the Department of Kinesiology in the Fall of 1997. Dr. Harms is originally from Nebraska and he received his graduate degrees in exercise physiology from Colorado State University and Indiana University, followed



Research participant undergoing whole body heat stress

by a post-doctoral fellowship at the University of Wisconsin. Dr. Harms currently is co-director of the Human Exercise Physiology lab and his primary research interest is in cardiopulmonary exercise physiology. Specifically, his research seeks to determine the limits of the human cardiopulmonary system for gas exchange, respiratory muscle pressure development and for ventilatory output across the lifespan in health and in disease. He is also interested in how men and women differ in these responses. Some of Dr. Harms current research projects are investigating 1) how prepubescent boys and girls differ in their ventilatory response during exercise and how this affects exercise performance, 2) how increased body fat and a sedentary lifestyle may lead to the development of exercise induced asthma in children, 3) the effect of fish oil supplementation on airway inflammation, 4) the influence of dietary antioxidants on diaphragmatic fatigue and exercise performance, 5) if high intensity interval training improves respiratory muscle strength and airway function. The outcomes from these projects will help in our overall understanding of how the cardiopulmonary system functions during exercise and help identify limitations in this system in both health and disease.

Dr. Thomas Barstow came to the Kinesiology Department at K-State from Harbor-UCLA Medical Center in Los



2008 Central States ACSM PhD Student Award winner
Sara Rosenkranz

Angeles, where he had been a faculty member for 11 years. Prior to working at UCLA, Dr. Barstow received his BS (Nutrition Science), MA (Physical Education) and PhD (Physiology) from U.C. Davis. Dr. Barstow is co-director of the Human Exercise Physiology Laboratory with Dr. Harms. His primary interests lie in understanding how muscle metabolism is controlled during exercise, and how the cardiovascular system is regulated to provide adequate O₂ to the working muscles during exercise. A developing focus examines how the effects of disease processes such as diabetes alter vascular function. Dr. Barstow's current research projects include 1) assessment of the role of oxidative stress in muscle fatigue, and how antioxidants may extend exercise tolerance, 2) testing how diabetes affects the smallest blood vessels (microvasculature) during exercise or ischemia, 3) using a mild head down tilt position to simulate the microgravity of space, determine the effects of microgravity on cardiovascular function, and the adaptations that take place with training in this position, and 4) using a noninvasive, near infrared spectroscopy or NIRS, to measure muscle metabolism and microvascular responses during and following cuff ischemia. These studies contribute to understanding how the responses of the cardiovascular system are coordinated in a variety of situations, as a precursor to studies designed to assess the effects of disease processes on this coordination.



Research examining control of leg blood flow during exercise



Focus on Alumni– John Scott

John Scott (1992 Graduate) started out as a Biology and Art major at Fort Hays State, then found his way into the Kinesiology program at Kansas State University. As the successful owner of five fitness clubs in the Kansas City area, his journey is reflected in the clubs he owns. John developed an interest in bodybuilding and continued that interest while working in the Chet Peters Recreation Center at Kansas State. With a choice of KU or KSU, John saw KSU as a better fit and a better choice. John worked with faculty at the time like Dr. Bob Kraemer and Dr. Ed Acavedo, and his interest in the functioning and response of the human system continued to grow. All aspects of the Kinesiology program influenced his attitudes on training and in ways to improve the fitness field. After graduation, John spent time teaching Anatomy and Physiology at Fort Riley for Barton County Community College. John also took graduate courses in the Veterinary Department and worked on some EEG studies with Dr. Karla



Kubitz. John continued to teach Anatomy and Physiology for the Barton and Highland Community Colleges outreach programs. He also taught Anatomy and Physiology and Medical Terminology in the CMA program at Topeka Technical College. The plan was to develop a better textbook for Anatomy and Physiology, but eventually he decided that it was time for a change. John began working for his friend as a personal trainer and trained out of his friend's basement, eventually moving to a commercial space. Gradually the client base grew and with it, so did the facilities and equipment. John had his own views on fitness and soon left to start Scott Fitness, Inc. with his long-time business partner Jonetta Stewart. He views his job as providing an enjoyable location for the typical person to workout in. You won't find any high-pressure tactics of some of the larger chains. The goal is for exercise to be entertaining and fun, and this simple model has allowed for the rapid growth of his business. With adherence to exercise as a goal, a pleasing and artistic environment, and good people to work for him, John has put his stamp on the fitness environment in Kansas City. Looking at the company website at www.scottfitness.com, you get a sense of the fun-loving and enjoyable experience found at Scott Fitness. Classes like Project Poolside, Dumbbell 101, and Yoga Is for Every Body, demonstrate the variety and innovativeness of this fitness setting. Scott Fitness is for regular people who are looking for a place to exercise. John Scott has used his background, his work ethic, and his creativity to craft a fitness facility for the ordinary person.



John (on right) with a member

Focus on the Undergraduate - Pam Wittman

Pam Wittman, Kinesiology senior, plans to travel after May graduation- to the ACSM conference in Seattle to present her research, and then to study abroad to observe active commuting behavior in the United States and Europe. Graduate school will follow once a career path is determined. Pam is keeping an open mind about all possibilities, and hopes her travels will guide her search for a topic for graduate school. As an undergraduate, Pam wanted to be involved, and realized that her interests lay closer to Public Health than Physiology. She chanced upon an opportunity to work with Dr. Melissa Bopp on an active commuting research project that connected several ideas Pam loves: physical activity, community health, and environmental stewardship. Pam found the research experience to be time consuming, but rewarding, and now holds a greater appreciation of the research in the department. Pam's favorite thing about K-State is the 'spirit of communication' between faculty and students, and she has found the open door policy of Kinesiology professors to be very beneficial. The faculty really enjoy what they teach and research, and that model of academic integrity influences students to also find something they care about. New leadership activities for Pam include being Intramurals Coordinator for KSA, and volunteering in the after school garden club research study called projectPLANTS: Promoting Lifelong Physical Activity and Nutrition Through Schools. Pam's advises students to take a lighter course load and to commit to the activities that matter the most to them.





New Kinesiology Faculty

Dr. Andrew Kaczynski joined the Department of Kinesiology in August 2008 as an Assistant Professor and Co-Director of the Physical Activity and Public Health Laboratory. Andy is married to Jen and they have two beautiful daughters, Abby (5) and Kate (2). He and his family arrived in Manhattan from Waterloo, Ontario, Canada last summer and are settling into the Little Apple community quite well.

Andy's research focuses on how neighborhood and community design affect the physical activity people engage in for transportation and recreation. His educational and professional background is in parks and recreation management, so he has a natural interest in how the availability and design of parks facilitate opportunities for physically active behaviors among children and adults. Some of his current projects include a study of active commuting patterns among KSU and Manhattan community members (with Dr. Melissa Bopp), research into health needs and resources among Latinos in Southwest Kansas (with Dr. Bopp and Dr. Elizabeth Fallon), and an upcoming study of physical activity levels of visitors to Kansas City parks. He currently teaches courses in the Department of Kinesiology on physical activity and the built environment, program planning and evaluation, and research methods.



Andy completed his undergraduate and PhD degrees in the Faculty of Applied Health Sciences at the University of Waterloo in Ontario. In between, he received his Master's degree in recreation, park, and tourism management at Texas A&M University and is therefore somewhat acclimated already to the excitement of the Big 12. He has also worked as a membership manager at a branch of the YMCA of Greater Toronto and as a consultant on master plans for public and private recreation and culture organizations. In his free time, Andy enjoys exploring the community with his family, playing poker and golf, and he is currently training for his first St. Patrick's Day 10K race in Manhattan.

Class Notes– Alumni Information

Send us information about a new job, promotion, address change, area code change, marriage, or birth. Send us stories and photos from your days at Kansas State. Simply fill out the form below to help us keep our records up-to-date, or email information to the Kinesiology department at kines@ksu.edu. Information provided below may be included in an upcoming issue of the Kinesiology newsletter. Mail your updated information and comments to:

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or fax your comments to: 785-532-6486 or e-mail: kines@ksu.edu



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2008 Kinesiology Scholarship Banquet

Honoring our brightest and best.

Bringing together a historic location and the most meritorious of our Kinesiology Majors, on April 24, 2008, the Union Pacific Train Depot was abuzz with excitement. For the first Annual Kinesiology Awards Banquet the Depot was resplendent in Kansas State purple with Wildcats aplenty contrasting beautifully with the deep parchment-yellow walls and freshly-oiled original teaks and mahoganies. Tables were loaded with Famous Dave's barbecue ribs, brisket and chicken amidst mountains of salad and fixins with a range of wines, beers and soft drinks to wash it all down. The Depot first opened in 1866 and saw the embarkation of troops to fight in the "great wars." History oozes from the beamed vaulted ceilings and elegant bay windows. President Theodore Roosevelt delivered his 'whistlestop' speech to a large and appreciative crowd here on

May 2, 1903. Since then it has survived the major flood of 1951 and a fire in 1981 as well as the last departure of passenger (1971) and freight (1984) trains and, most recently, the Kinesiology Awards Banquet. Awardees - dressed to the nines - their parents, friends and honored guests were greeted at the door by Kinesiology staff, graduate students and officers of the Kinesiology Students Association; contemporary music played gently in the background and old friends and new got acquainted. Stories were told, memories relived and the friendliness and comradeship that makes the Midwest

so special was fueled by excellent food and oiled with appropriate adult beverages (underwritten by staff donations, of course). Dr. David Dzewaltowski, Head of Kinesiology, gave a brief and compelling history of the Depot and then David Poole, Chair of the Awards Committee introduced the awardees with a few personal words. Certificates were presented by Dr. Craig Harms and Dr. Rob Pettay stood in as our official photographer. Of special note, Mrs. Kathy Smith, a senior graduate (in 1959) of the Department (then P.E.) was on hand to enjoy the festivities and share her personal memories of the Depot, Dr. Eva Lyman (Lyman Scholarship endowment) and the K-State that she has known and loved through the decades. Other noteworthy presences at the Banquet were Dr. and Mrs. Larry Noble (Emeritus Professor of Kinesiology) who have endowed The Department with a scholarship in their name (see photo of the Nobles with honoree Kelly Marshall) and Kathy Smith (BS, 1959) who recently established the Katherine Horridge Smith Kinesiology Scholarship.



Kathy Smith (BS, 1959) and Eva Lyman
recipient Jessica Stidum

The 2008 Kinesiology Scholarship Award winners were:

Compton: Chrishonda Brown, Diann Beuthin, Shannon Hulsing

Eva Lyman: Jessica Stidum

Sykes: Brianne Rogers, Eric Dierksen, Christopher Fox

Ito Family: Jenna Ediger

Barbara Moses: Whitney Wear

Noble Fitness Promotion: Kelly Marshall



Connie and Larry Noble with
Noble recipient Kelly Marshall



2008 Scholarship Winners

Katherine Horridge Smith Kinesiology Scholarship - While visiting Manhattan to attend the Baylor-KSU Basketball game Kathy Smith (B.S. degree in the Physical Education Department) also took time to establish a new scholarship. The Katherine Horridge Smith Scholarship will provide support for a female sophomore or junior enrolled in Kinesiology. The recipient shall actively volunteer at the university or in her community. Contributions from the past and those in the future allow the Kinesiology Department to compete for top students and future health professionals. Thank you for your support.



Kinesiology Donor List 2008

A big thanks for all the individuals who have helped support the Kinesiology program and students through the years. Contributions made throughout the year, during telefund, and through special requests help fund student scholarships, provide faculty support, and provide academic support for the department.

(Gifts of \$100 or more from July 1, 2007 – June 30, 2008)

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The department of Kinesiology would like to thank you for your generous support of the department. Endowment from past donations allows us to offer scholarships to undergraduate students, which certainly helps them in these times of tuition increases and enhances our recruiting of top students. General funds supplement the department's operating budget to enhance our ability to provide a high quality of education to our students, to conduct research, and to attract and support new faculty.

If you wish to donate to any of the Department of Kinesiology funds (see below) please complete the form above and check where you would like you gift to go to. Please call us at 785-532-6765 or email at kines@ksu.edu if you have any questions.

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New Course and Technology Lab in Kinesiology

Kinesiology 398 – Anatomy and Physiology – was taught for the first time in the Fall semester of 2008 with an enrollment of thirty-two students. Lauren Hammel, a former Kinesiology undergraduate and graduate student was hired to lead the lecture section of the course with Christian Larson as the assistant lecturer and lab instructor. A new high tech lab was built in part in the Northeast side of the men's locker room in Ahearn Fieldhouse. GYM 10 features 10 workstations for groups of two students. Each workstation is equipped with a quick loading icon for the Anatomy and Physiology Revealed (APR) software. GYM 10 also features an overhead document camera and integrated projector making instruction as efficient as possible. Students each have a copy of the APR software, allowing them to study and learn anywhere on their laptop computers. Spring 2009 saw enrollment jump to 47 students, filling both morning sections of the lab. Future sections of the course will allow up to eighty students to take Anatomy and Physiology per semester. This class provides students with a cutting-edge opportunity to learn and progress through the Kinesiology major. A nationally recognized faculty, popular course offerings, and enhancements like the new technology lab have made Kinesiology one of the fastest growing and largest departments in the College of Arts and Sciences. Each year more and more of the top scholars in across the state and country are choosing the Kinesiology program as their undergraduate degree. Your support and promotion of the department of Kinesiology has made this progress possible.



Instructor Christian Larson lectures in the new Kinesiology Anatomy and Physiology technology