



Published WORKS

College of Education Utah State University

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Dear Colleagues:

We continue to look for ways to share information about the scholarly and research accomplishments of College of Education faculty and staff. Our most recent effort, *Published WORKS*, is devoted to publications. This first issue features the *Department of Health, Physical Education and Recreation*, which offers undergraduate programs in school health and community health, exercise science, parks and recreation, pre-physical therapy, and physical education teaching, and graduate programs in corporate wellness, exercise science, and health education. We hope you enjoy reading about some topics being investigated by faculty in one of our most student friendly and active departments.

Carol Strong, Associate Dean for Research

PATHS to Healthier Schools



Gast, J., & Lounsbery, M. (2002). Planned approach to healthier schools. *Health Education & Behavior*, 29(2), 160-161.

Julie Gast, PhD: Associate Professor, Utah State University, HPER; Monica Lounsbery, PhD: Assistant Professor, University of Nevada-Las Vegas

Julie Gast, associate professor in health education, has an interest in projects and research related to community health, weight loss management, and health risk perception. She is also interested in self-esteem and disordered eating patterns.

Objectives. Planned Approach to Healthier Schools (PATHS) is a school-based modification of the Centers for Disease Control's Planned Approach to Community Health model. Public health professionals and teachers collaborate to educate and empower adolescent students to solve their own school's health problems as they relate to physical activity and nutrition. Social learning theory is the conceptual framework from which PATHS was developed and implemented—all with a view toward effective behavior change. PATHS students collect Youth Risk Behavior Survey data on their school population and use these data to plan, implement, and evaluate interventions that target physical activity, nutrition behavior, and attitude change.

Program strategy. Students chose a slogan—"get up, get out, get fit" and a logo developed to brand PATHS. Five phases were incorporated for implementing the program and training students to become health educators.

Evaluation. A pretest/posttest control group design was used to measure the effects of PATHS on the physical activity and nutrition behavior of students at four rural school sites in the same community (two high school and two junior high schools). One high school and one junior high school served as the experimental group, whereas the remaining schools served as a control. Qualitative data were also collected to determine the effectiveness of the PATHS model and to identify additional changes in the school environment.

Implications. PATHS provides authentic learning experiences for students and is flexible in terms of structure, function, and content. In addition, PATHS provides the unique opportunity to access the hard-to-reach adolescent target population in a sustained manner. Preliminary implications are that school health and physical education personnel, and the public health system, can work together to address Healthy People 2010 objectives.

Healthier Golf

Kras, J., & Larsen, B. (2002). A comparison of the health benefits of walking and riding during a round of golf. *The International Sports Journal*, 6, 112-116.

John M. Kras, EdD: Associate Professor, Utah State University, HPER; Brian T. Larsen: Graduate Assistant, Utah State University, HPER

John Kras, associate professor and chair of the physical education program, has professional and research experience in coaching and athletic administration. He has also conducted research related to golf fitness. Dr. Kras has expertise in the history and philosophy of physical education and sport in America.

Purpose. Only 37% of adults report engaging in moderate activity in the U.S. and 25% report no leisure-time physical activity whatsoever. Because most adult Americans report their favorite leisure-time activity is walking, it may prove beneficial (continued on back)





golf continued. to articulate the health benefits of walking during the sport of golf, an increasingly popular pastime. The purpose of this study was to determine (a) whether there was a significant difference between golfers' fitness values for three methods of moving around a

golf course during a round of golf, and (b) to determine whether there was a difference among golfers' fitness values for flat versus hilly golf course terrains.

Method. Twelve 42-57 year-old males took part in this study of three different treatments on three different golf courses during a round of nine holes of golf.

Results. There was a statistically significant mean training zone effect for the three conditions: (a) riding in an electric golf cart, (b) walking, carrying a golf bag, and (c) walking and pulling clubs on a pull cart. Walking, while either pulling or carrying a golf bag on both flat and hilly terrains, resulted in the largest training zone effect (percent of time at forty percent of maximum heart rate).

Relevance. Based on these results, golf could have a meaningful impact on health because, under the right conditions, golf can contribute to the 30 minutes of activity recommended by the American College of Sports Medicine and by the Surgeon General. In addition, these findings will allow golf course administrators to rate the fitness benefits from playing golf based on the amount of time one spends in a training zone during play at specific courses. These ratings will allow golfers to choose between the modes of movement around these golf courses based on their need for fitness activity.

Bicycle Seat Design Considerations

Bressel, E., & Larson, B. (2003). Bicycle seat designs and their effect on pelvic angle, trunk angle, and comfort. *Medicine & Science in Sports & Exercise*, 35(2), 327-332

Eadric Bressel, EdD: Assistant Professor, Utah State University, HPER, Biomechanics Laboratory; Brad J. Larson, MD: Surgeon, Alpine Orthopaedic Specialists

Eadric Bressel, assistant professor of physical education in biomechanics, has served as a postdoctoral research fellow for the neuromuscular research unit at Auckland University of Technology in New Zealand. He actively conducts research and seeks grants in the following areas: anatomical and biomechanical determinants of Achilles tendon rupture, biomechanics and physiology of cycling, and passive joint stiffness in pathological populations.

Congratulations to Ronda Menlove, Special Education and Rehabilitation. Ronda has been selected as the Chair-Elect of the American Council on Rural Special Education (ACRES), a group of special educators dedicated to rural special education issues.

Purpose. To examine if bicycle seats with anterior-medial cutouts influence pelvic angle, trunk angle, and comfort in females during cycling.

Methods. Twenty female cyclists pedaled a stationary bicycle with their hands on the tops and drops of the handlebars under three different saddle conditions (standard, partial, and complete cutout designs; Fig. 1).

Pelvic angle was measured using an inclinometer attached to a caliper, while trunk angle was quantified from digitization of video images. Comfort level was assessed subjectively by having participants rank the saddles from most to least comfortable.

Results. Anterior pelvic tilt angles for the partial and complete cutout saddles were 8% and 16% greater, respectively, than values for the standard saddle condition ($p < 0.05$). Trunk flexion angles were greater for the complete versus standard and partial cutout designs ($p < 0.05$). Participants displayed a 77% greater anterior pelvic tilt angle and an 11% greater trunk flexion angle in the drop versus top handlebar positions ($p < 0.05$). Fifty five percent of the subjects ranked the partial cutout saddle as the most comfortable and 30% ranked the standard saddle as the most comfortable.

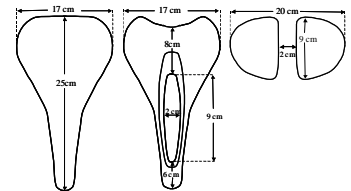


Figure 1: Top view of Standard Design; Partial Cutout Design; Complete Cutout Design

Conclusions. These data indicate that partial and complete cutout saddle designs may increase anterior pelvic tilt, and saddles with a complete cutout design may increase trunk flexion angles under select cycling conditions. A saddle with a partial cutout design may be more comfortable than a standard or complete cutout saddle design.

Relevance. The anterior perineum (or crotch) is an area of pain and trauma often suffered by men and women during bicycling. Perineal pain is thought to be the most common non-traumatic pain syndrome experienced by male and female cyclists and epidemiological studies have indicated that 35-81% of cyclists complain of pain in the perineum and buttock region following long distance rides. Perineal pain during bicycling is often related to the cyclist's position on the bicycle and the design of the seat. The newly designed cutout seats may relieve perineal pain and allow the pelvis and trunk to move into a greater anterior tilt position. If females are able to achieve a forward pelvic and trunk tilt without perineal pain their comfort level during bicycling may increase and their incidence of low pack pain may decrease.

COE Research Council: Jim Dorward • Nick Eastmond • Rich Gordin • Grace Huerta • Randy Jones • Richard Roberts • Julie Smart • Carol Strong • Karl White