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CHN Staff Members Present at NAASO

The 2006 Annual Scientific Meeting for the North American Association for the Study of Obesity (NAASO), also known as The Obesity Society, was convened in Boston, October 20-24. Two of our researchers, Vicki Catenacci, MD, and Nanette Stroebele, PhD, presented posters at this event. Dr. Catenacci also gave an oral presentation of her poster.

Following are the abstracts of these presentations:

Title: How much physical activity is required for weight loss maintenance?

VICTORIA A CATENACCI, MD¹, HOLLY R WYATT, MD¹, LORRAINE G OGDEN, PHD¹, JENNIFER STUHT, MA¹, SUZANNE PHELAN PHD², RENA R WING, PHD², and JAMES O HILL, PHD¹. ¹Denver, CO, United States and ²Providence, RI, United States.

Background: Successful weight loss maintainers in the National Weight Control Registry (NWCR) report engaging in 2621±2252 kcal/wk of physical activity and maintaining a weight loss of 71.3±36.8 lbs on registry entry. Data from the NWCR and other studies support the recommendation of a minimum of 60 min/day of moderate activity for weight loss maintenance. Though most NWCR participants are very active, there is a large variation in how much activity they report. The aim of this study was to attempt to understand determinants of the amount of physical activity reported by NWCR participants and to evaluate activity as a predictor of 3 year weight regain.

Methods: We evaluated weekly physical activity habits using Paffenbarger Physical Activity Questionnaire on registry entry (1993-2004, n=3591) and at 3 year follow up (data available for 80% of eligible subjects). We divided subjects into 4 levels of activity at entry and year 3 with roughly equal numbers/group:

<1000 kcal/week, 1000 to <2250 kcal/wk, 2250 to <3500 kcal/wk, and >3500 kcal/week.

Results: Subjects with higher levels of activity on registry entry had a lower age and BMI, and a greater % were male. Level of activity reported at registry entry was associated with amount of weight loss maintained on entry (66.7 ± 32.7 , 69.0 ± 36.5 , 71.4 ± 35.1 , 77.2 ± 40.8 lbs, p for trend <0.0001) but was not predictive of 3 year regain. Activity level at year 3 was associated with weight regain between entry and year 3 (16.6 ± 22.9 , 10.1 ± 18.2 , 8.3 ± 15.0 , 6.7 ± 14.0 lbs, p for trend <0.0001). In general, change in activity level from entry to year 3 was related to amount of regain with decreases in activity associated with greater regain and maintenance/increase associated with less regain.

Conclusions: These results support the concept that physical activity is important for long term weight loss maintenance, and that a dose response relationship exists between activity and weight regain. However, some subjects report maintaining a significant weight loss on registry entry with relatively low levels of activity and some subjects reporting high levels of activity at follow up experienced weight regain. A better understanding of individual-specific determinants of how much activity is required for weight loss maintenance should be a high research priority.

Title: A community based health program is effective in producing small reductions in diet and small increases in physical activity.

Stroebele, N., Stuht, J., Catenacci, V., Schroeder, L.R., Hill, J.O.

Background: Effective obesity interventions are important but it is equally important to develop weight gain prevention programs. Successful strategies need to be developed that support weight maintenance. The America on the Move (AOM) Program encourages small changes in diet and physical activity as a method to prevent weight gain. The program is comprised of a recommendation to increase physical activity up to 2,000 steps/day and to decrease food intake by 100 kcals/day through substitution of healthier food choices for less healthy ones. It was hypothesized that when given the AOM Program, participants would be able to reduce their food intake by 100kcal/day and increase their baseline number of steps/day by 500 steps over the period of 7 days.

Methods: Food diaries were analyzed using a food item database. Meals were characterized by their total caloric and their macronutrient content. Subject ANOVAs were conducted to compare meal size and overall food intake (including macronutrient composition) during baseline and intervention week. The recorded steps/day were averaged and the baseline average was compared to the average intervention week using mean comparison analyses.

Results: Comparisons of daily caloric intake between baseline and intervention week revealed a significant reduction with a mean daily intake of 2079kcal/day during the baseline week and 1765kcal/day during the intervention week, $p<.01$. In addition, less daily amounts of carbohydrates, $p<.01$, fat, $p<.01$, and protein, $p<.01$, were reported during the intervention week. During the baseline week, more caloric drinks, $p<.01$, especially sugared sodas, $p<.05$, were consumed in comparison to the

intervention week. Overall steps changed between baseline and intervention week, $p=.00$, with an increase of ca. 1,454 steps per day!

Conclusion: The results indicate that a community based weight gain prevention program can be effective in reducing participants' food intake minimally and in increasing steps/day. The mean daily intake during the intervention week was reduced by ca. 300kcal/day which indicates that the recommendations to decrease intake by 100kcal/day are feasible, easy to understand and to implement. Small changes to eating behavior and physical activity can be successful ways to prevent further weight gain in today's society.

The AOM Health Care Professional Toolkit is ready and up on the web!

Martha Tenney, MPH

In the early days of America On the Move becoming established as a national initiative, Jim Hill and other AOM staff would get requests from health care professionals (HCPs) for a way to enhance communication with patients about the importance and benefits of increased physical activity and "smarter" eating. Some HCPs were doing some things, but they were looking for tools—several ideas and ways to encourage positive change.

As a result, the America On the Move staff (Helen Thompson, Joanie Jones, Mary Barry, Martha Tenney, and Mercedes Martinez) developed a prototype toolkit to be used in clinic settings by health care professionals and other clinic staff. Further enhanced by focus group testing and



Colorado and national feedback, the toolkit has been pilot tested in two Colorado clinics and is now up and ready for actual use in clinics throughout the country. Stay tuned for the Spanish patient resources, being tested this year as part of a Colorado Department of Public Health and Environment grant and in partnership with the Metro Community Provider Network (MCPN).

Holly Wyatt, MD served as a key advisor to the development of the AOM HCP Toolkit project. The intent was to design several components that would work in busy clinic settings and be useful tools to enhance HCP and clinic environment messages to patients and ultimately, improve patient behavior around physical activity and eating more healthily. There are currently twenty components in all—half are resources and tools for HCPs and the clinic setting (e.g., posters, flyers, "prescription" for increased activity/eating less calories or "smarter" eating; BMI charts for adults and children, and more!). The rest of the toolkit components are patient resources and materials that they can take home and use in their own real world settings. For example, these materials include tips on how to wear a step counter, a guide to healthy grocery shopping, fast facts on diabetes and the prevention of weight gain. As noted in the evaluation of the toolkit, HCPs liked having the options in a menu format on a CD or on the web. They wanted a way to be able to pick and choose components that are most relevant to their own practices and the patients that they see.

Log on to www.americaonthemove.org and view or download any of the HCP Toolkit components—for free! We would love to have any feedback from anyone who uses any parts of the toolkit. Check it out and let us know!

Social Marketing in Philips Elementary
Kristin Hoffman

America On the Move has embarked upon a social marketing campaign at Philips Elementary School in Denver, targeting

improvements in selection and consumption of vegetables during school lunch.

Funds from the Robert Wood Johnson Foundation-funded Healthy Eating By Design program were used to purchase motivational posters, non-food rewards for classroom use, books for the library, props, stickers and other motivational incentives related to fruits, vegetables and healthy eating.



Three different types of vegetables were monitored prior to and following implementation of the social marketing campaign with assistance from Johnson and Wales student volunteers. These vegetables include: garden greens, baby carrots, and broccoli.

Preliminary data suggests that the percent of students selecting the vegetable of interest

remained constant, while a shift in consumption trends shifted favorably.

“An Evening with Hazel” Marsha Miller, MS, RD

Look Ahead Study participants enjoyed a night of dinner, music and dancing held at Hudson Gardens on a beautiful, warm evening this past fall. The evening’s event took place in the scenic Garden Canopy where participants were surrounded by an array of yellow, red and orange seasonal flowers. The night started with a scrumptious dinner buffet consisting of apricot glazed chicken breast, rosemary garlic new potatoes, green bean almondine, finished off with a delectable dessert of fresh fruit cup with fresh mint, honey, and lime juice served in a martini glass.

A total of 200 participants and guests were serenaded by the vocal and musical talents of the Hazel Miller Band, a local blues and jazz band. Hazel Miller kicked-off the evening by sharing a very motivating message to the participants regarding her personal story about the challenges of living with diabetes. Her genuinely, warm personality and sense of humor were infectious and inspirational for all of us. This retention event was the most successful in the history of Look AHEAD!

Employee News

New at CHN

Jeanne Anne Breen, MS

Jeanne Anne joins the Center for Human Nutrition as Assistant Director of Clinical Trials. She previously worked at Stanford University as Research Manager for the Depression Research Clinic in the Department of Psychiatry. She has her Master's degree in clinical counseling. Jeanne Anne, her husband, and two young boys moved to Colorado from Monterey, California in August. She has spent the last several years as a full-time mom and is excited to return to clinical research on a part-time basis.

Amber Carlson, MS

Amber Carlson recently began working at CUHSC as a Professional Research Assistant for Ed Melanson, Ph.D. Her academic career consists of a B.S. in General Science and B.S. in Physical Education, both from Fort Hays State University, Kansas and a M.S. in Kinesiology

from the University of Rhode Island, Kingston, RI. During her spare time she enjoys coaching gymnastics, heading to the mountains for snowboarding or traveling every chance she gets.

Emily Hoagland, MS

Emily joins the Center for Human Nutrition as a Professional Research Assistant for Clinical Trials. She has just completed her Master's degree in nutrition from the University of Utah and taken the certification exam to become a Registered Dietitian. Emily is a Colorado native and is very glad to be back close to her husband and her family after 2 years in Salt Lake City. In her spare time, she trains for and competes in triathlons.

Departing CHN

Andy Wise

Andy has accepted a position as the Assistant Director for Boling Clinical Trials, a freestanding clinical trials organization specializing in the therapeutic area of rheumatology and osteoporosis. He will be working with JoAnn Phillipp, a former CHN staff member who now directs this organization in southern California. Although we are sorry to see him go, it is a fabulous opportunity for him and we wish him well. Andy starts his new position in early January.

The Director's Corner
James O. Hill, PhD

2006 was an exciting year for the Center for Human Nutrition! We received new Federal grants, our Clinical Trials operation has grown, and we added some wonderful new staff members. We now have possibly the best staff we have ever had and, because of this, we are poised for an even better 2007!

In the next year, I anticipate further growth and am very excited about the projects and possibilities we have before us. 2007 holds the promise of being the best year yet for CHN. I am grateful for our staff and the interest and support of so many wonderful people and organizations outside of CHN.

With warm wishes for a happy Holiday Season,
Jim