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Funding: John Harvey Kellogg Endowment Research Funds, MSU NSF-AGEP.

P156 A Comparison of the Nutrient Content Between Gluten-Free Foods to Matched Gluten-Containing Products

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Objective: To compare macronutrient and micronutrient content of gluten-free (GF) products from a variety of categories to matched gluten-containing (GC) products.

Design, Setting and Participants: Nutrition information for GF products (n=104) was obtained from nutrition labels provided on GF product manufacturer websites. Nutrition information for equivalent matched GC products (n=104) was obtained during on-site data collection at grocery stores in Gainesville, Florida. Products were matched and grouped based on product type, preparation, and description.

Outcome Measures and Analysis: All products were standardized to 100 gram servings. Data were analyzed using Microsoft Excel. Researchers tested for significant differences in macronutrient and micronutrient content using student's t-test, with significance set at $p < .05$.

Results: Percent Daily Value (%DV) for thiamin, niacin, riboflavin, iron, and folate were significantly higher in GC loaf breads, oats/cereals, and baking mixes than in their GF counterparts ($p < .02$). However, the %DV for calcium was significantly higher in GF versus GC cookies ($p = .01$). GC pastas had significantly higher protein content than GF pasta ($p < .0001$), while total fat for granola/granola bars and loaf breads was significantly higher in GF products versus GC products ($p < .02$).

Conclusions and Implications: Significant differences in micro- or macronutrients were detected in all categories. These micronutrient differences are likely due to the enrichment and fortification of refined grain products. Following a GF diet may lead to altered patterns of nutrient intake, including an inadequate intake of certain micronutrients if a multivitamin is not also consumed. Nutrition education for individuals following a GF diet should include specific information about meeting micronutrient and macronutrient recommendations.

Funding: University of Florida/IFAS Dean for Research.

P157 Understanding Why Women of Childbearing Age Follow a Gluten-Free Diet and Determining Where They Get Their Information

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Objective: To better understand why women of childbearing age follow a gluten-free (GF) diet and to determine where they get information on GF diets.

Design, Setting and Participants: A convenience sample (n=86) of women of childbearing age (18-45 y) following a GF diet completed an online survey developed by the researchers that included demographic questions and evaluated reasons for starting a GF diet and where they obtained their information.

Outcome Measures and Analysis: Descriptive statistics from the online survey are provided.

Results: The majority of participants were white (86%). Thirty-one percent were between 20-24 years, and 40% were university students. When asked how long they had followed a GF diet, 23% indicated 1-2 years while only 12% indicated more than five years. Participants indicated starting a GF diet for one or more of the following reasons: celiac disease diagnosis (44%), non-celiac gluten sensitivity (49%), irritable bowel syndrome (26%), and wheat allergy (23%). When presented with the statement, "A gluten free diet alone provides me with adequate amounts of vitamins and minerals," 64% either agreed or strongly agreed. Only 14% reported consulting a Registered Dietitian to obtain information regarding their GF diet. Other sources included friends and family (58%), medical websites (39%), blogs (36%), and magazines (10%).

Conclusions and Implications: The women surveyed are not aware that their diet may be low in certain micronutrients if they do not consume a multivitamin/mineral supplement and are not seeking information from a qualified health professional. These women should be encouraged to consult a Registered Dietitian to obtain information on how to properly follow a GF diet.

Funding: University of Florida/IFAS Dean for Research.

P158 Racial/Ethnic Differences in the Associations Between Parents' Body Mass Index, Behaviors and Child Weight Status

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Objective: Obesity is linked to racial/ethnic and socioeconomic disparities, but little is known about the potential intermediary role of parental behaviors. This study examined the racial/ethnic differences in parent BMI and parental behaviors as potential determinants of child weight status.

Design, Setting and Participants: Data were collected through interviews with 432 low-income mothers of preschool age children in a multi-state study. Body weight and height were measured.

Outcome Measures and Analysis: Healthy food intake and physical activity behavior checklist (BC), parental dietary modeling (PDM), parental overt and covert control on child's diet, caregiver feeding style (demanding; respon-

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sive), family mealtime routines, family sense of coherence, economic strain, parent/child BMI (based on measured weight/height), race/ethnicity (Hispanic, non-Hispanic black [black], non-Hispanic white [white], other). Data analyses included Kruskal Wallis test and structural equation modeling (SEM).

Results: BC and PDM mean scores were lower among Hispanic and black parents than whites ($p < .01$). Hispanic parents had the highest demanding feeding style scores and the lowest responsive feeding style scores ($P < .01$). Racial/ethnic differences in overt/covert control, mealtime routines, family sense of coherence, and economic strain were not statistically significant. Racial/ethnic differences were evident in parent BMI ($p < .01$) but only approached significance for child BMI ($p = .06$). Race/ethnic group-specific SEM analyses indicated that the direct link between parent and child BMI was strongest among blacks. Feeding styles partially mediated the associations between parent and child BMI; these associations were stronger among Hispanics than in the other racial/ethnic groups.

Conclusions and Implications: These results suggest that direct and indirect associations between parent and child BMI exist and vary by race/ethnicity.

Funding: USDA.

P159 Perceived Barriers to Physical Activity Among Low-Income, Hispanic Teenagers in New Jersey

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Objective: This study sought to assess perceived barriers to physical activity among low-income, Hispanic teenagers in New Jersey.

Design, Setting and Participants: This was a descriptive study in which a convenience sample of low-income, Hispanic teenagers ($n = 711$), recruited from three high schools and five community agencies, completed a quantitative survey regarding barriers to physical activity.

Outcome Measures and Analysis: Forty-five barriers, identified in previous research, were rated, using a 5-point Likert scale (i.e., 1 = never and 5 = always), according to how often teens' perceived they prevented them from being active. Teens' physical activity levels were measured using the Physical Activity Questionnaire for Adolescents (PAQ-A). Descriptive statistics, and mean barrier and PAQ-A scores were calculated. Student's t-test was used to assess differences between mean scores and gender.

Results: Twenty of the 45 barriers items prevented teens from being active (i.e., mean score ≥ 2.0). These barriers were primarily related to motivation, weather, and the lack of a place to be active, proper equipment and/or an exercise companion. Top barriers reported by male and female participants were similar, differing only in their rank. Females perceived significantly more barriers to

physical activity, and reported significantly ($p < 0.0001$) lower physical activity levels (PAQ-A scores) than male Hispanic teens.

Conclusions and Implications: Interventions should provide more motivating (fun) and more indoor activity opportunities to improve physical activity levels of Hispanic teenagers. Further research is needed in other locations. By identifying pertinent barriers to activity, physical activity interventions and materials may be designed that address the specific needs of the target audience.

Funding: New Jersey Supplemental Nutrition Assistance Program-Education.

P160 Improved Body Composition and Health-Related Attitudes: A 6-Week Pilot Weight Management Study

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Objective: To determine the effectiveness of a theory-based, 6-week weight management and mindful eating pilot program targeting adults in a group environment.

Design, Setting and Participants: A qualitative formative evaluation, based on previous program outcome data and current literature, was used to inform the design of a 6-week weight management and mindful eating group intervention. Components included lecture, hands-on activities, partner interactions and take-home tasks. 23 overweight/obese adults, 21 of which were female, aged 22-74 years old successfully completed the program.

Outcome Measures and Analysis: Participant outcomes were evaluated by: collecting preliminary and post-intervention anthropometrics via bioelectrical impedance and measurements of health-related attitudes using a Likert-type scale. Informal feedback was continuously collected and qualitatively analyzed for content themes.

Results: Participants lost an average of 1.7 pounds and 1-inch at the waist and improved attitudes related to self-efficacy, improved health expectancies, and perceived benefits associated with health-related behavior change. They identified opportunities for accountability and participant discussion and reflection as lacking; these missing social support components were determined to be barriers to participant success.

Conclusions and Implications: Overweight/obese individuals enrolled in a 6-week theory-based weight management and mindfulness intervention improved body composition and health-related attitudes. Participants desired accountability and seek occasions to share and reflect. Weight management interventions in a group setting can further improve participant perceived and actual anthropometric outcomes and attitudes with the addition of accountability components and frequent exposure to opportunities for social support.

Funding: Kendall Anderson Nutrition Center.