P205 (continued)

and one weekend day. Diet records were analyzed by at least two independent study staff members using ESHA Food Processor. Mean intake of macronutrients and micronutrients were analyzed, and t-tests were used to determine if mean intake differed significantly from recommended intake levels.

Results: The mean caloric intake for participants was 2108 kcal/day (± 89) while mean intake of protein was 85 g (± 4); carbohydrate was 214 g (± 11); and fat was 96 g (± 6). Mean intakes were significantly lower than current recommendations for vitamin D ($p < .001$), folate ($p < .001$), thiamin ($p < .001$), vitamin B6 ($p = .02$), calcium ($p < .001$), and iron ($p < .001$). However the mean intakes for niacin, riboflavin, and fiber were not significantly different than recommended levels.

Conclusions and Implications: Women of child-bearing age who follow a GF diet are not consuming the recommended levels of certain nutrients, specifically folate and iron, which are important to women before and during pregnancy. Nutrition education for these women should address the importance of folic acid and iron supplements since GF foods often lack fortification and enrichment.

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P206 Classroom Teacher Professional Development in Nutrition Education Programs: Connecting Theory to Practice

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Objective: The purpose of this research is to describe elements and incidence of high quality teacher professional development (HQPD) among teacher-led kindergarten-12 (K-12) nutrition education programs.

Design, Setting and Participants: This secondary analysis of studies utilized research from a previous systematic review of ($n=26$) K-12 school-based nutrition interventions. Studies ($n=11$) were included if they described teacher training as part of their educational intervention. Consideration for classification as having adopted any analyzed measure of HQPD was at least one mention or description of the HQPD aspect.

Outcome Measures and Analysis: Elements of HQPD were identified using empirically based research in K-12 education and included content focus, active learning, coherence, duration, collective participation, follow-up, and feedback. Descriptive statistics were utilized to identify frequency at which elements were included in research.

Results: The most commonly cited aspect of HQPD was duration (89%), followed by content focus (55%), coherence (45%), collective participation (45%), and follow-up (27%). No studies cited aspects of active learning or feedback.

Conclusions and Implications: Research and policies have identified schools as targets for youth nutrition edu-

cation. Like other educational programs, these require training for individuals who implement them. Although none of the studies reviewed were focused on investigating HQPD, of the 42% that reported any teacher education component, little description of HQPD elements was included. However, inclusion and description of these elements in peer-reviewed studies is critical to their inclusion in future programming and research. Future research should consider the role that HQPD plays in the implementation and effectiveness of school-based nutrition education.

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P207 Process Evaluation of the Smarter Lunchrooms Randomized Controlled Trial: Year Two Results

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Objective: To conduct process evaluation of the implementation of Smarter Lunchrooms (SL), an intervention based on the principles of behavioral economics and designed to improve student food selection in school cafeterias through small, low cost environmental changes.

Design, Setting and Participants: Process evaluation based on the RE-AIM framework was conducted in order to monitor fidelity to the SL protocol in six treatment middle schools in New York State, determine the extent to which the intervention was maintained after conclusion of the six-week study, and understand barriers and facilitators to implementation.

Outcome Measures and Analysis: Lunchroom audits provided semi-quantitative measures of implementation and maintenance, while qualitative data (environmental assessments and semi-structured interviews with school food service directors and cafeteria managers), were analyzed to identify challenges and opportunities for improving intervention delivery.

Results: Analyses revealed varying compliance with intervention protocol associated with limitations of cafeteria line structures, as well as with school staff motivation and perceived effectiveness. Post-intervention audits revealed limited maintenance of intervention elements, thus highlighting opportunity to focus on increasing cafeteria staff buy-in. Continued efforts to enhance communication among all levels of staff at all points of the intervention will be necessary in order to support SL efforts.

Conclusions and Implications: Process evaluation provided data to determine barriers and facilitators associated with the SL intervention protocol. These findings will enhance interpretation of forthcoming outcome data, and will inform design changes that may improve treatment fidelity and maintenance. Results should also provide useful insight for others designing environmental interventions, especially in school cafeterias.

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