

Nutrition Able: A Lecture-based Intervention to Promote Nutritional Literacy About Protein Intake in Women

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ABSTRACT

Sport performance is influenced by sport-specific requirements for body composition. One major predictor of body composition is protein intake. Higher protein intake tends to cause leaner body composition relative to lower protein intake, especially during caloric deficit. In Bexar County, ~72% of the adult population is overweight/obese and 15.5% are diabetic. This suggests that high protein diet could be a high leverage option in the San Antonio population for optimizing body composition for sport performance. Furthermore, late life sporting activity and protein intake is a primary method for mitigating sarcopenia, osteoporosis, fractures, and accidental death in post-menopausal women.

PURPOSE: This project, called Nutrition Able, aims to teach Bexar County middle school and high school students in food-scarce areas how to read a nutrition label with their health in mind through hands-on, in-person, lectures in Southside and Southwest ISD classrooms, emphasizing the importance of dietary protein. **METHODS:** Pairs of health professions students give lectures and administer health literacy assessments. Before each lecture, we inform students that they will be taking an anonymous non-graded survey. The survey consists of 7 multiple-choice questions regarding calories, macronutrients, calories per serving, macronutrient content, fiber, protein, and diabetes/obesity prevention. No assistance interpreting the questions is provided. We also collect the following demographic data at the students' discretion: height, weight, sex, grade, age, and family history of obesity and diabetes (FH). Following the pre-survey, our lecture is given. Afterwards, an identical post-survey is administered. **RESULTS:** To date, 11 lectures reaching 432 students between 6th and 12th grade have been given. Overall, there were large improvements in pre-/post-survey scores (2.47 vs. 3.31, $P < < < .05$), with improvements in all seven questions, median (2 vs. 3), and mode (2 vs. 4). For 6 out of the 7 questions on the survey, male and female students had no significant difference in post-survey rates of correct responses. The question which did reach statistical significance was the question about protein's health benefits. Women scored lower on this question in both pre- (25% vs. 37%, $P = .015$) and post-surveys (36% vs. 49%, $P = .01$), with no difference in the improvement in score. **CONCLUSION:** Nutrition Able is effective at improving health literacy broadly but has room to improve in emphasizing protein's efficacy as a tool improving for sport performance and body composition in women. Long-standing myths that lifting weights and eating protein will drastically change your appearance often disincentivize women from engaging in important health promoting behaviors like resistance training and eating a high protein diet, putting them at risk for post-menopausal sarcopenia, osteoporosis, and debilitating fractures. Future talks will further emphasize that protein is an important nutritional factor for all demographics, especially women.