

## Longitudinal Changes of Breakfast and Physical Activity Behaviors of Children in 5<sup>th</sup> Grade

Higgins, BD., Werner, EN., Gilman, AD., Volpe, SL., FACSM. Drexel University, Philadelphia, PA

In Philadelphia, 40% of children, 6 to 17 years of age, are currently categorized as overweight or obese. Additionally, 86.2% of this population exercise three or more times per week for at least 30 minutes. School-based interventions have been shown to be effective to help increase healthy behaviors and decrease childhood obesity rates.

**PURPOSE:** To assess changes in consumption of breakfast and days spent participating in 60 minutes of physical activity per week, over the 2014 to 2015 school year, in children in the fifth grade provided health intervention programming in the school setting. **METHODS:** Children in the fifth grade from 12 elementary schools in the Greater Philadelphia area participated in a three-year school-based ecological intervention, which included two levels of intervention schools (Core and Level 1) and Control schools. Throughout the school year, intervention components for Core schools included preparation of healthy lunches, produce tastings and fitness classes. Level 1 schools included the same components as Core schools, but with less frequency and without preparation of healthy lunches. Control schools received no intervention. Youth behavior surveys were completed at the beginning and end of the school year to measure frequency of breakfast consumption and physical activity. **RESULTS:** Baseline breakfast intake response means were  $5.90 \pm 2.11$  days for Core schools,  $6.05 \pm 1.79$  days for Level 1 schools and  $5.70 \pm 2.07$  days for Control schools. Post-intervention means increased to  $5.92 \pm 1.97$  days ( $p=0.92$ ), decreased to  $5.90 \pm 2.08$  days ( $p=0.40$ ) and increased to  $5.90 \pm 2.26$  days ( $p=0.43$ ), respectively. Baseline physical activity response means were  $4.58 \pm 2.44$  days for Core schools,  $4.44 \pm 2.10$  days for Level 1 schools and  $4.57 \pm 2.13$  days for Control schools. Post-intervention means decreased to  $4.68 \pm 2.11$  days ( $p=0.66$ ), increased to  $4.67 \pm 2.10$  days ( $p=0.23$ ) and increased to  $4.68 \pm 2.12$  days ( $p=0.66$ ), respectively. **CONCLUSION:** No significant changes were observed in daily breakfast consumption or number of days engaged in 60 minutes of physical activity from baseline to post-intervention in this population of children in 5<sup>th</sup> grade. Approaches aimed to increase healthy behaviors in children to decrease the rate of childhood obesity warrant further investigation.

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