Introduction. Overweight and obesity increase individuals risk for chronic diseases. In 2009, 14 % of Missouri ninth to twelfth graders were overweight. This study examined the efficacy of Active and Healthy Schools (AHS) to increase physical activity time and steps while decreasing total screen time; and increase healthy food choices among fifth, sixth, seventh, and eighth students at two private Missouri schools.

Methods. TS implemented AHS two years, while CS implemented AHS one year. With AHS, playgrounds were zoned, classroom activity breaks were used, and positive nutrition behaviors were reinforced. Students wore pedometers to collect physical activity time and step counts, and filled out data collection logs capturing total screen time each day during data collection. The CAPA questionnaire was administered and students completed the 2009 BYRSS nutrition questions to measure food and drink consumption.

Results. Physical activity time at school for CS (p=0.001) increased 9.55 minutes. CS home physical activity time increased 2.96 minutes. At CS, fifth grade physical activity time increased compared to sixth and eighth graders. Screen time at TS decreased (p=0.001) by 8.25 minutes. Fifth graders had a greater increase in physical activity time compared to sixth and eighth grades and an increase in physical activity time at home compared to seventh and eighth grades. At TS boys had greater physical activity time. CS had an increase in 100% fruit juice consumption (p=0.026). Soda pop consumption increased at CS (p=0.028).

Conclusion. School-wide environmental changes (i.e. zoning playgrounds and classroom activity breaks) should be incorporated at school to increase physical activity. Future studies should focus how to decrease soda pop consumption and determine if sex- and/or grade-specific interventions are needed.