Fruit and Vegetable Consumption of Adolescents

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**ABSTRACT**

**Objective:** To examine the demographic and physiological differences between students based on their self-reported consumption of fruits and vegetables.

**Methods:** Data collected from students who participated in Project Healthy Schools (PHS) 2004-2016 and completed both a baseline health behavior questionnaire and a physiological screening were analyzed. Students were divided into two groups based on the number of servings of F/V they consumed the previous day: “high consumers,” ≥ 3 servings or “low consumers,” < 3 servings.

**Background:** Studies have identified health benefits and socioeconomic barriers to fruit and vegetable (F/V) consumption. This study describes characteristics and physiological outcomes based on F/V consumption of adolescents participating in Project Healthy Schools (PHS).

**Results:**

- *Lower recovery heart rate (an indicator of fitness) was seen in high F/V consumers.*
- *Higher triglyceride levels in high fruit and vegetable consumers.*
- *Fruit and vegetable consumption varied significantly by race and SES.*

**Conclusions:** Demographic and socioeconomic factors were associated with variations in F/V consumption in this adolescent population. High F/V consumers had lower recovery heart rates, which may indicate better health and fitness. Future studies should investigate the integration of F/V into cultural dietary practice as well as methods to improve the affordability and attainability of F/V in order to reduce health disparities.

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**BACKGROUND**

**Methods:** Data from middle-school students who were enrolled in PHS and completed an optional health behavior questionnaire and physiological screening were analyzed. Students were divided into two groups based on the number of servings of F/V they consumed the previous day: “high consumers,” ≥ 3 servings or “low consumers,” < 3 servings. Demographics and physiological measures were compared between groups.

**Results:** Of 2813 students, 1457 (51.8%) were high consumers. High consumers were less likely to be Black and more likely to be Asian than low consumers. High consumers were also more likely to be from middle or low SES school districts and less likely to be from middle or low SES school districts than low consumers. High consumers had higher triglyceride levels and lower recovery heart rates than low consumers.

**Conclusions:** Demographic and socioeconomic factors were associated with variations in F/V consumption in this adolescent population. High F/V consumers had lower recovery heart rates, which may indicate better health and fitness. Future studies should investigate the integration of F/V into cultural dietary practice as well as methods to improve the affordability and attainability of F/V in order to reduce health disparities.