

Gender and stress related effects on cardiovascular health outcomes

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ABSTRACT

Background and Purpose: To date, only a few investigators have compared the effect that stress may have on health and metabolic outcomes in college age adults. The purpose of this study was to determine the extent to which gender may play a role in self-reported stress and cardiovascular and metabolic outcomes in college age students. **Methods:** Thirty-eight ($N = 38$) adults ages 18 to 28 participated in this study. Height, weight, supine resting heart rate and supine blood pressure were measured. Subjects completed the Institute of HeartMath® *Stress and Well-Being Survey*™ to measure psychological stressors, total stress score, total well-being, and emotional vitality. Total blood cholesterol, HDL, LDL, triglycerides, TC/HDL ratio, and glucose were measured in a randomly selected subset of 13 subjects ($N = 13$; 7 females and 6 males) using the Cholestech LDX®. Independent t-test and Pearson correlations were used to analyze differences between male and female responses. **Results:** Males reported significantly higher systolic ($P < 0.05$) and diastolic ($P < 0.05$) blood pressures than females as well as glucose levels ($P < 0.01$). Males also reported higher amounts of work related stress ($P < 0.01$). **Conclusion:** This preliminary investigation revealed that college age males reported significantly higher systolic and diastolic blood pressures as well as glucose levels than their female counterparts. Females had significantly higher HDL than males, but this is common in college age adults. There were no significant differences regarding stress components, cardiovascular or metabolic health outcomes and gender. Stress components such as work and finances were shown to correlate with systolic and diastolic blood pressure in both genders, but a larger sample size is needed to find a relationship.