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Higher Serum Lycopene is Associated with Reduced Prevalence of Hypertension in Overweight or Obese Adults

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Abstract

Introduction: Epidemiologic studies suggest an association between overweight/obesity and hypertension. As a middle mediator between overweight/obesity and hypertension, serum uric acid plays an important role in the renin-angiotensin-aldosterone system. As a natural antioxidant, lycopene can effectively inhibit the angiotensin-converting enzyme activity and attenuate oxidative stress induced by angiotensin-II. Therefore, the objective of this study was to determine whether lycopene could have an association with lower levels of hypertension in individuals who are overweight and obese. **Methods:** A total of 8,556 adult participants with BMI \geq 25 from the National Health and Nutrition Examination Survey 2001-2006 were used to examine the associations among serum uric acid, serum lycopene and hypertension in this study. **Results:** It was found that there was a significant positive association between serum uric acid and hypertension while there was a significant inverse association between serum lycopene and hypertension. Furthermore, there was a significant association between the ratio of serum lycopene to serum uric acid and hypertension in adults who are overweight/obese. **Conclusions:**

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