



**CALIFORNIA STATE SCIENCE FAIR
2010 PROJECT SUMMARY**

Name(s) Antranik M. Byas	Project Number S1806
Project Title Investigating the Relationship Between Hypokalaemia and Excessive Consumption of Carbonated Drinks	
Abstract Objectives/Goals This study seeks to investigate the effects of consuming large amounts of carbonated drinks in terms of muscle-related problems like hypokalaemia, a condition in which the concentration of potassium in the blood is low. Methods/Materials Ten volunteers consisting of adults and teens participated in this experiment along with a control group of ten people. The ten volunteers were excessive soda drinkers prior to the experiment. The control group only drank water and/or juices. If the control group drank any sodas, it was only an extremely small amount. I had to keep track of the weekly and monthly habits of each participant regarding their intake of soda, the soda brand, and any muscle aches they experienced. Each person submitted a copy of their blood test before and after the 3-month research period in order to monitor their sugar and potassium levels. Results The experiment's outcome showed that excessive soda drinkers had abnormal sugar and potassium levels. The heavy soda drinkers don't drink enough water to balance their diet. The ones who had very low potassium levels did experience some muscle pains especially the adults. This is due to the harmful ingredients in certain carbonated beverages. The control group's level of potassium and sugar remains within the normal range. Conclusions/Discussion The study shows that adults are more affected than teens due to the fact that the teens surveyed are more active than the adults. Furthermore, it reinforces the fact that consuming excessive amounts of carbonated drinks can have detrimental effects to the body.	
Summary Statement Excessive consumption of carbonated drinks can lead to muscle-related problems like hypokalaemia in teenagers and adults.	
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