Determining the effect of normal and diet soda on blood glucose level of 15 healthy female participants using a glucose meter

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Abstract:

Introduction: "Soft drink consumption has become a highly visible and controversial public health and public policy issue." Even though it is widely accepted that soft drinks contribute to osteoporosis, heart disease, dementia, obesity, and type II diabetes mellitus, soft drinks are among the nine most consumed drinks around the world. One type of soft drink that is being highly researched on is diet soft drink/soda. Diet sodas contain artificial sugars, such as aspartame and sucralose, instead of natural complex sugars to seemingly reduce the risk of developing diabetes and gaining weight. Soft drinks are very popular to female teenagers such as myself, especially diet sodas for those of us who would like to maintain a balanced non-caloric diet that would not increase the risk of developing type II diabetes mellitus. Aim: The aim of this experiment is to examine the effects that sugar sweetened soda and artificial sugar sweetened soda have on the blood glucose level of 15-18-year-old female participants, using their fasting blood sugar (FBS) as a baseline for the experiment. Conclusion: Either soda type had its own unique impact on each participant, but the general result attained suggests a rate of recurrence of BGL (Blood Glucose Level) raising remarkably after 30 minutes of normal soda consumption, and BGL staying tenacious after diet soda consumption. On the contrary, the fasting BGL of the participants did not stay unswerving throughout the study, the FBS of participants after drinking both diet and normal soda showed a 5.85% increase in 21 days. This raises concerns for those who drink either soda frequently. Diet soda, in fact, raised the mean fasting BGL of participants the highest in the third trial, suggesting that perhaps diet soda consumption may eventually lead to type II diabetes much faster in teenage girls.

Keywords: healthy participants glucose